

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

RECEIVED

JAN 22 2014

**PUBLIC SERVICE
COMMISSION**

In the Matter of:

THE APPLICATION OF)
NEW CINGULAR WIRELESS PCS, LLC)
AND AMERICAN TOWERS LLC)
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC) CASE NO.: 2013-00435
CONVENIENCE AND NECESSITY TO CONSTRUCT)
A WIRELESS COMMUNICATIONS FACILITY)
IN THE COMMONWEALTH OF KENTUCKY)
IN THE COUNTY OF MONROE)

SITE NAME: CENTER POINT

* * * * *

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

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

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

1. The complete name and address of the Applicants: New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility, having a local address of 601 West Chestnut Street, Louisville, Kentucky 40203; American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers LLC, having a mailing address of 10 Presidential Way, Woburn, MA 01801.

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

3. The Certificate of Authority filed with the Kentucky Secretary of State for AT&T Mobility was attached to a prior application and is part of the case record for PSC case number 2011-00473 and is hereby incorporated by reference. A certificate of formation for American Towers LLC is attached as part of **Exhibit A**.

4. AT&T Mobility operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the AT&T Mobility's FCC license to provide wireless services is attached to this Application or described as part of **Exhibit A**, and the facility will be constructed and operated in accordance with applicable FCC regulations. American Towers LLC will build, own and manage the tower and tower compound where AT&T Mobility will place its equipment building, antennas, radio electronics equipment and appurtenances.

5. The public convenience and necessity require the construction of the

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

6. To address the above-described service needs, Applicants propose to construct a WCF at 8721 Center Point Road, Tompkinsville, Kentucky 42167 (36°43'41.33" North latitude, 85°34'13.59" West longitude), on a parcel of land located entirely within the county referenced in the caption of this application. The property on which the WCF will be located is owned by Johnny Graves, et al, pursuant to a Deed recorded at Deed Book 79, Page 871, and Deed Book 50, Page 67, in the office of the Monroe County Clerk. The proposed WCF will consist of a 195-foot tall tower, with an approximately 4-foot tall lightning arrestor attached at the top, for a total height of 199-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the AT&T Mobility's radio electronics equipment and appurtenant equipment. The WCF equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be constructed is attached as **Exhibit B** and **Exhibit C**.

7. A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete is attached as **Exhibit D**, along with a map of suitable scale showing the location of the proposed new construction as well as the location of any like facilities located anywhere within the map area, along with a map key showing the owner of such other facilities.

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

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

10. Applicants have considered the likely effects of the installation of the proposed WCF on nearby land uses and values and have concluded that there is no more suitable location reasonably available from which adequate services can be provided, and that there are no reasonably available opportunities to co-locate the necessary antennas on an existing structure. When suitable towers or structures exist, AT&T Mobility attempts to co-locate on existing structures such as communications towers or other structures capable of supporting its facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site. A report detailing the site selection process for the subject site (including an explanation as to why co-location is not possible for this site) is attached as **Exhibit E**.

11. A copy of the Determination of No Hazard to Air Navigation issued by the Federal Aviation Administration (“FAA”) is attached as **Exhibit F**.

12. A copy of the Applicant’s application to the Kentucky Airport Zoning Commission (“KAZC”) is attached as **Exhibit G** along with an email from the KAZC stating that KAZC approval is not necessary to construct a tower on this site.

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

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

15. Applicants, pursuant to a written agreement, have acquired the right to use the WCF site and associated property rights. A copy of the agreement or an abbreviated agreement recorded with the County Clerk is attached as **Exhibit J**. Financial terms of the agreement are confidential and proprietary and have been redacted.

16. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. The tower and foundation drawings for the proposed tower submitted as part of **Exhibit C** bear the signature and stamp of a

professional engineer registered in the Commonwealth of Kentucky. All tower designs meet or exceed the minimum requirements of applicable laws and regulations.

17. The Construction Manager for the proposed facility is Ron Rohr, and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained **Exhibits B & C**.

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

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

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

21. Applicants have notified the applicable County Judge/Executive by certified

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

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

23. The general area where the proposed facility is to be located is rural and sparsely populated. No residential structures are located within a 500-foot radius of the proposed tower location.

24. The process that was used by the AT&T Mobility radio frequency engineers in selecting the site for the proposed WCF was consistent with the general process used for selecting all other existing and proposed WCF facilities within the proposed network design area. AT&T Mobility's radio frequency engineers have conducted studies and tests in order to develop a highly efficient network that is designed to handle voice and data traffic in the service area. The engineers determined an optimum area for the placement of the proposed facility in terms of elevation and location to provide the best quality service to customers in the service area. A radio frequency design search area prepared in reference

to these radio frequency studies was considered when searching for sites for antennas that would provide the coverage deemed necessary by AT&T Mobility. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant to radio frequency requirements is attached as **Exhibit O**.

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

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

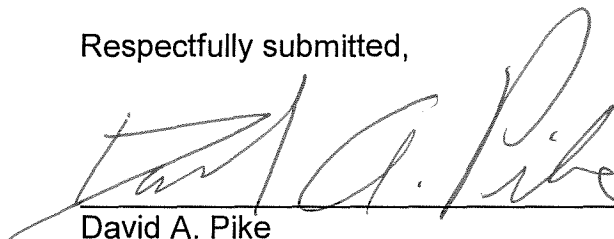
David A. Pike
Pike Legal Group, PLLC
1578 Highway 44 East, Suite 6
P. O. Box 369
Shepherdsville, KY 40165-0369
Telephone: (800) 516-4293
Telefax: (800) 541-4410
Email: dpike@pikelegal.com

Patrick W. Turner
General Attorney-Kentucky
AT&T Kentucky
1600 Williams Street
Suite 5200
Columbia, South Carolina 29201
Telephone: (803) 401-2900
Telefax: (803) 254-1731
Email: pt1285@att.com

Matthew Russell
Attorney
American Towers LLC
10 Presidential Way
Woburn, MA 01801
Telephone: 781.926.7154
Email: matthew.russell@americantower.com

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

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David A. Pike". The signature is written in a cursive style with a horizontal line underneath the name.

David A. Pike
Pike Legal Group, PLLC
1578 Highway 44 East, Suite 6
P. O. Box 369
Shepherdsville, KY 40165-0369
Telephone: (800) 516-4293
Telefax: (800) 541-4410
Email: dpik@pikelegal.com
Attorney for New Cingular Wireless PCS, LLC
d/b/a AT&T Mobility

and

Matthew Russell
10 Presidential Way
Woburn, MA 01801
Telephone: 781.926.7154
Email: matthew.russell@americantower.com
Attorney for American Towers LLC d/b/a Delaware
American Towers LLC

LIST OF EXHIBITS

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

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

Delaware

PAGE 1

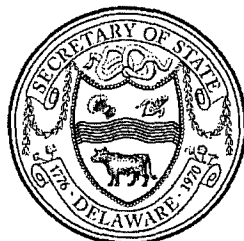
The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF A DELAWARE CORPORATION UNDER THE NAME OF "AMERICAN TOWERS, INC." TO A DELAWARE LIMITED LIABILITY COMPANY, CHANGING ITS NAME FROM "AMERICAN TOWERS, INC." TO "AMERICAN TOWERS LLC", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF JUNE, A.D. 2011, AT 11:54 O'CLOCK A.M.


AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF CONVERSION IS THE THIRTIETH DAY OF JUNE, A.D. 2011, AT 11:59 O'CLOCK P.M.

2525871 8100V

110780451



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

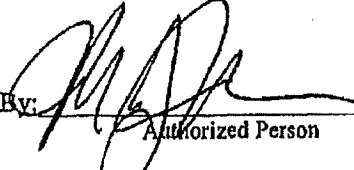

Jeffrey W. Bullock, Secretary of State
AUTHENTICATION: 8874959

DATE: 06-30-11

STATE OF DELAWARE
CERTIFICATE OF CONVERSION
FROM A CORPORATION TO A
LIMITED LIABILITY COMPANY PURSUANT TO
SECTION 18-214 OF THE LIMITED LIABILITY ACT

- 1.) The jurisdiction where the Corporation first formed is Delaware.
- 2.) The jurisdiction immediately prior to filing this Certificate is Delaware.
- 3.) The date the corporation first formed is July 19, 1995.
- 4.) The name of the Corporation immediately prior to filing this Certificate is American Towers, Inc.
- 5.) The name of the Limited Liability Company as set forth in the Certificate of Formation is American Towers LLC.
- 6.) The effective date of this Certificate of Conversion is the 30th of June, 2011 at 11:59 p.m.

IN WITNESS WHEREOF, the undersigned have executed this Certificate on the 29 day of June, 2011 A.D.

By: 
Authorized Person
Name: Michael John McCormack
Print or Type

Delaware

PAGE 2

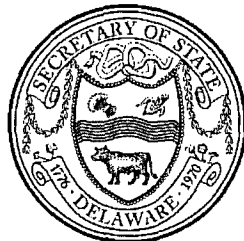
The First State


I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF CERTIFICATE OF FORMATION OF "AMERICAN TOWERS LLC" FILED IN THIS OFFICE ON THE THIRTIETH DAY OF JUNE, A.D. 2011, AT 11:54 O'CLOCK A.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF FORMATION IS THE THIRTIETH DAY OF JUNE, A.D. 2011, AT 11:59 O'CLOCK P.M.

2525871 8100V

110780451




Jeffrey W. Bullock, Secretary of State
AUTHENTICATION: 8874959

DATE: 06-30-11

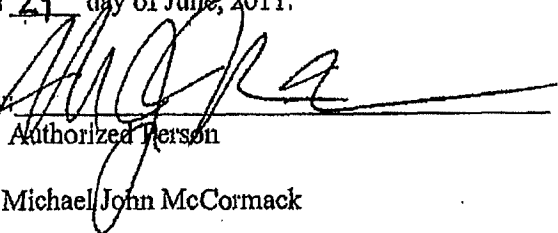
CERTIFICATE OF FORMATION

OF

AMERICAN TOWERS LLC

1. The name of the limited liability company is American Towers LLC.
2. The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.
3. The effective date of this Certificate of Formation is June 30, 2011 at 11:59 p.m.

IN WITNESS WHEREOF, the undersigned have executed this Certificate of Formation of American Towers LLC this 29 day of June, 2011.

By 
Authorized Person

Michael John McCormack

ULS License

PCS Broadband License - WQFA871 - New Cingular Wireless PCS, LLC

Call Sign	WQFA871	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	BTA052 - Bowling Green-Glasgow, KY	Channel Block	E
Submarket	4	Associated Frequencies (MHz)	001885.00000000-001890.00000000-001965.00000000-001970.00000000

Dates

Grant	04/11/2007	Expiration	04/28/2017
Effective	11/24/2012	Cancellation	

Buildout Deadlines

1st	2nd
-----	-----

Notification Dates

1st	2nd
-----	-----

Licensee

FRN	0003291192	Type	Limited Liability Company
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Licensee

New Cingular Wireless PCS, LLC 2200 N. Greenville Ave, 1W Richardson, TX 75082 ATTN Reginald Youngblood	P:(972)234-7003 F:(972)301-6893 E:FCCMW@att.com
--	---

Contact

AT&T Mobility LLC Michael P Goggin 1120 20th Street, NW - Suite 1000 Washington, DC 20036 ATTN Michael P. Goggin	P:(202)457-2055 F:(202)457-3073 E:michael.p.goggin@att.com
--	--

Ownership and Qualifications

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

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

Basic Qualifications

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

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

ULS License

PCS Broadband License - WPOI255 - NEW CINGULAR WIRELESS PCS, LLC

Call Sign	WPOI255	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	MTA026 - Louisville-Lexington-Evansvill	Channel Block	A
Submarket	19	Associated Frequencies (MHz)	001850.00000000-001865.00000000-001930.00000000-001945.00000000

Dates

Grant	07/07/2005	Expiration	06/23/2015
Effective	11/24/2012	Cancellation	

Buildout Deadlines

1st	06/23/2000	2nd	06/23/2005
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Notification Dates

1st	07/07/2000	2nd	02/17/2005
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Licensee

FRN	0003291192	Type	Limited Liability Company
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Licensee

NEW CINGULAR WIRELESS PCS, LLC 2200 N. Greenville Ave, 1W Richardson, TX 75082 ATTN Reginald Youngblood	P:(972)234-7003 F:(972)301-6893 E:FCCMW@att.com
--	---

Contact

AT&T MOBILITY LLC Michael P Goggin 1120 20th Street, NW - Suite 1000 Washington, DC 20036 ATTN Michael P. Goggin	P:(202)457-2055 F:(202)457-3073 E:michael.p.goggin@att.com
--	--

Ownership and Qualifications

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

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

Basic Qualifications

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

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

ULS License

PCS Broadband License - KNLG909 - NEW CINGULAR WIRELESS PCS, LLC

Call Sign	KNLG909	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	BTA052 - Bowling Green-Glasgow, KY	Channel Block	F
Submarket	0	Associated Frequencies (MHz)	001890.00000000- 001895.00000000- 001970.00000000- 001975.00000000

Dates

Grant	09/28/2007	Expiration	08/21/2017
Effective	11/24/2012	Cancellation	

Buildout Deadlines

1st	08/21/2002	2nd	
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Notification Dates

1st	10/05/2001	2nd	
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Licensee

FRN	0003291192	Type	Limited Liability Company
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Licensee

NEW CINGULAR WIRELESS PCS, LLC 2200 N. Greenville Ave, 1W Richardson, TX 75082 ATTN Reginald Youngblood	P:(972)234-7003 F:(972)301-6893 E:FCCMW@att.com
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Contact

AT&T MOBILITY LLC Michael P Goggin 1120 20th Street, NW - Suite 1000 Washington, DC 20036 ATTN Michael P. Goggin	P:(202)457-2055 F:(202)457-3073 E:michael.p.goggin@att.com
--	--

Ownership and Qualifications

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

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

Basic Qualifications

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

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

ULS License

Cellular License - KNKN666 - New Cingular Wireless PCS, LLC

Call Sign	KNKN666	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA447 - Kentucky 5 - Barren	Channel Block	A
Submarket	0	Phase	2

Dates

Grant	08/30/2011	Expiration	10/01/2021
Effective	09/26/2013	Cancellation	

Five Year Buildout Date

10/16/1996

Control Points

1 124 South Keeneland Drive (Suite 103), MADISON, RICHMOND, KY
P: (859)544-4804

Licensee

FRN	0003291192	Type	Limited Liability Company
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Licensee

New Cingular Wireless PCS, LLC 2200 N. Greenville Ave, 1W Richardson, TX 75082 ATTN Reginald Youngblood	P:(972)234-7003 F:(972)301-6893 E:FCCMW@att.com
--	---

Contact

AT&T Mobility LLC Michael P Goggin 1120 20th Street, NW - Suite 1000 Washington, DC 20036 ATTN Michael P. Goggin	P:(202)457-2055 F:(202)457-3073 E:michael.p.goggin@att.com
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Ownership and Qualifications

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

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

Basic Qualifications

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

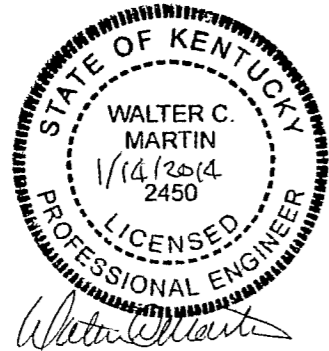
Demographics

Race		Gender	
Ethnicity			

EXHIBIT B

SITE DEVELOPMENT PLAN:

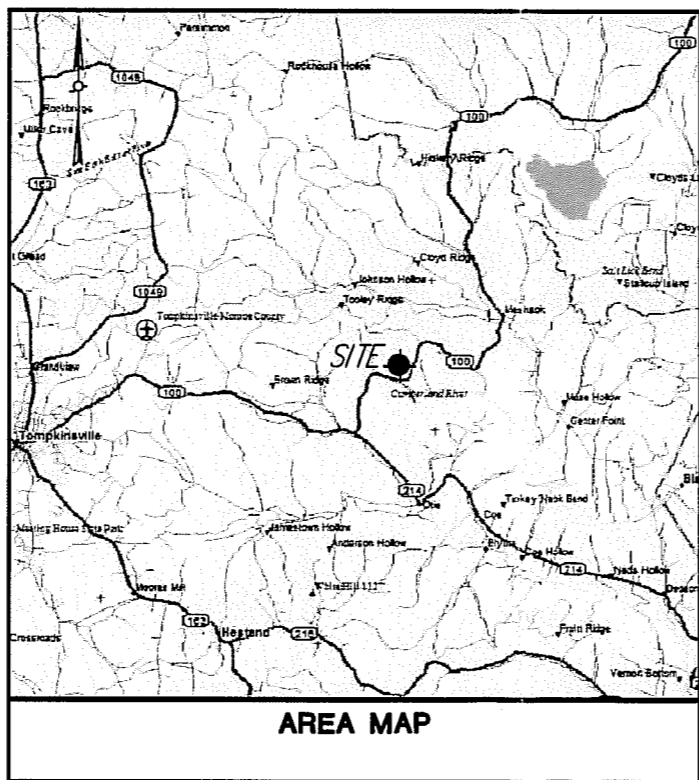
**500' VICINITY MAP
LEGAL DESCRIPTIONS
FLOOD PLAIN CERTIFICATION
SITE PLAN
VERTICAL TOWER PROFILE**



SITE NAME:
CENTER POINT

SITE NUMBER:
AT&T SITE #144243/ATC #281329

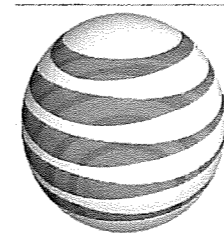
NEW 195' MONOPOLE TOWER INSTALLED WITHIN NEW
80' X 80' FENCED TELECOMMUNICATIONS FACILITY



AREA MAP

DIRECTIONS

BEGINNING AT THE MONROE COUNTY COURT HOUSE, 200 N MAIN STREET, TOMPKINSVILLE, KY, PROCEED NORTHEAST ON N. MAIN STREET/KY-63 FOR 0.9 MILES AND TURN RIGHT ONTO E 4TH STREET/KY-100. PROCEED 325 FEET AND TRUN LEFT ONTO N. MAGNOLIA ST/KY-100 PROCEED FOR 0.8 MILES. CONTINUE TO FOLLOW KY-100/CENTER POINT RD FOR 8.1 MILES. PROCEED NORTHEAST FOR 1.5 MILES TO 8475 CENTER POINT ROAD ON THE LEFT. PROCEED NORTH THRU THE PARENT TRACT'S DRIVE 0.2 MILES TO THE SITE ON THE RIDGE BEHIND THE RESIDENCE.



at&t



Formerly F.S. Land & T. Alan Neal Company
Land Surveyors and Consulting Engineers
406 E. Warwick Street
Louisville, KY 40217
Phone: (502) 636-8886 (502) 636-8111
Fax: (502) 636-8883

PROPERTY OWNER:
JOHNNY GRAVES ET AL.
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

SITE ADDRESS:
8721 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

SITE NUMBER:
AT&T SITE #144243/ATC #281329

REVISIONS	DATE	REV. TYPE & COMP. SIZE
08-16-13		REVISED DRAWINGS
09-26-13		REVISED COORDINATES
10-02-13		REVISED FINAL ZONE
12-12-13		REVISED SITE ADDRESS
12-16-13		REVISED SITE ADDRESS

DATE COMPLETED: 08-20-18

SITE NAME: CENTER POINT	TITLE SHEET	DATE: 06-25-13
		CHECKED BY: FS II
		DRAWN BY: SMF

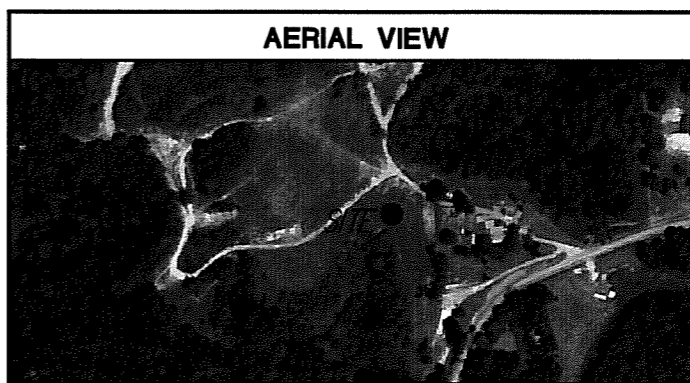
FS&N PROJECT NO.:
13-8590

T-1

SITE INFORMATION	
SITE NAME:	CENTER POINT
SITE NUMBER:	AT&T SITE #144243/ATC #281329
SITE ADDRESS:	8721 CENTER POINT ROAD TOMPKINSVILLE, KENTUCKY 42167
JURISDICTION:	MONROE COUNTY
TAX ACCOUNT ID:	60500001
MAP/PARCEL:	77-17, 83-17
PARCEL SIZE/COMPOUND SIZE:	100' X 100' / 80' X 80'
SITE COORDINATES:	36° 43' 41.33" N 85° 34' 13.59" W
GROUND ELEVATION:	876' +/-
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	195'
GROUND LANDLORD ADDRESS:	JOHNNY GRAVES ET AL. 8475 CENTER POINT ROAD TOMPKINSVILLE, KENTUCKY 42167
LANDLORD NAME:	JOHNNY GRAVES ET AL.
LANDLORD ADDRESS:	8475 CENTER POINT ROAD TOMPKINSVILLE, KENTUCKY 42167
APPLICANT:	AMERICAN TOWER CORPORATION 116 HUNTINGTON AVE. BOSTON, MA 02116
APPLICANT PHONE:	(617) 375-7500

CODE ANALYSIS	
BUILDING CODE:	IBC 2010 KY BLDG Code 2007
ELECTRICAL CODE:	NEC 2005
FIRE SAFETY CODE:	NFPA 101
USE GROUP:	U (UTILITY)
CONSTRUCTION TYPE:	11B

PROJECT DESCRIPTION	
1.	NEW 100' X 100' LEASED/ 80' X 80' FENCED TELECOMMUNICATIONS FACILITY TO BE INSTALLED.
2.	NEW 195' MONOPOLE TOWER TO BE INSTALLED WITHIN FENCED TELECOMMUNICATIONS FACILITY.
3.	NEW ELECTRICAL SERVICE TO BE INSTALLED.
4.	NEW TELEPHONE SERVICE TO BE INSTALLED.



AERIAL VIEW

SHEET INDEX	
DRAWING SHEET	DRAWING TITLE
T-1	TITLE SHEET
S-1	500' ADJOINERS AND ABUTTERS
S-2	SITE SURVEY
C-1	SITE LAYOUT
C1-1	COMPOUND PLAN
C1-2	DIM. TO PROPERTY LINES
C-2	TOWER ELEVATION

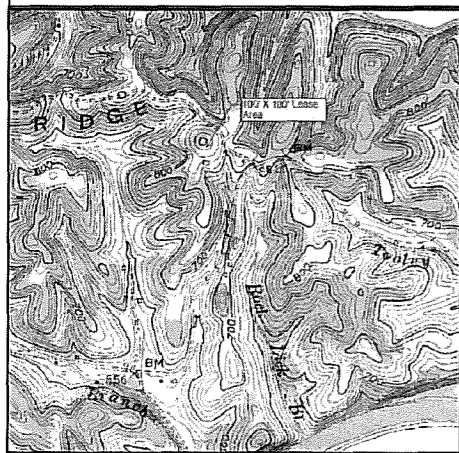
AMERICAN TOWER REVIEW	
THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS	
ATC R.F.:	DATE:
ATC ZONING:	DATE:
ATC S.A.:	DATE:
ATC P & T:	DATE:
ATC CONST.:	DATE:
ATC A&E MGR.:	DATE:
PROPERTY OWNER:	DATE:

SHEET 1	
	- VICINITY AND 500' STRUCTURAL MAP
	- ABUTTING PROPERTY OWNERS
	- U.S.G.S. QUAD MAP
SHEET 2	
	- LEASE AREA
	- LEGAL DESCRIPTIONS
	- FLOOD ZONE DATA

GRID NORTH
TRUE NORTH
00° 06' 37"

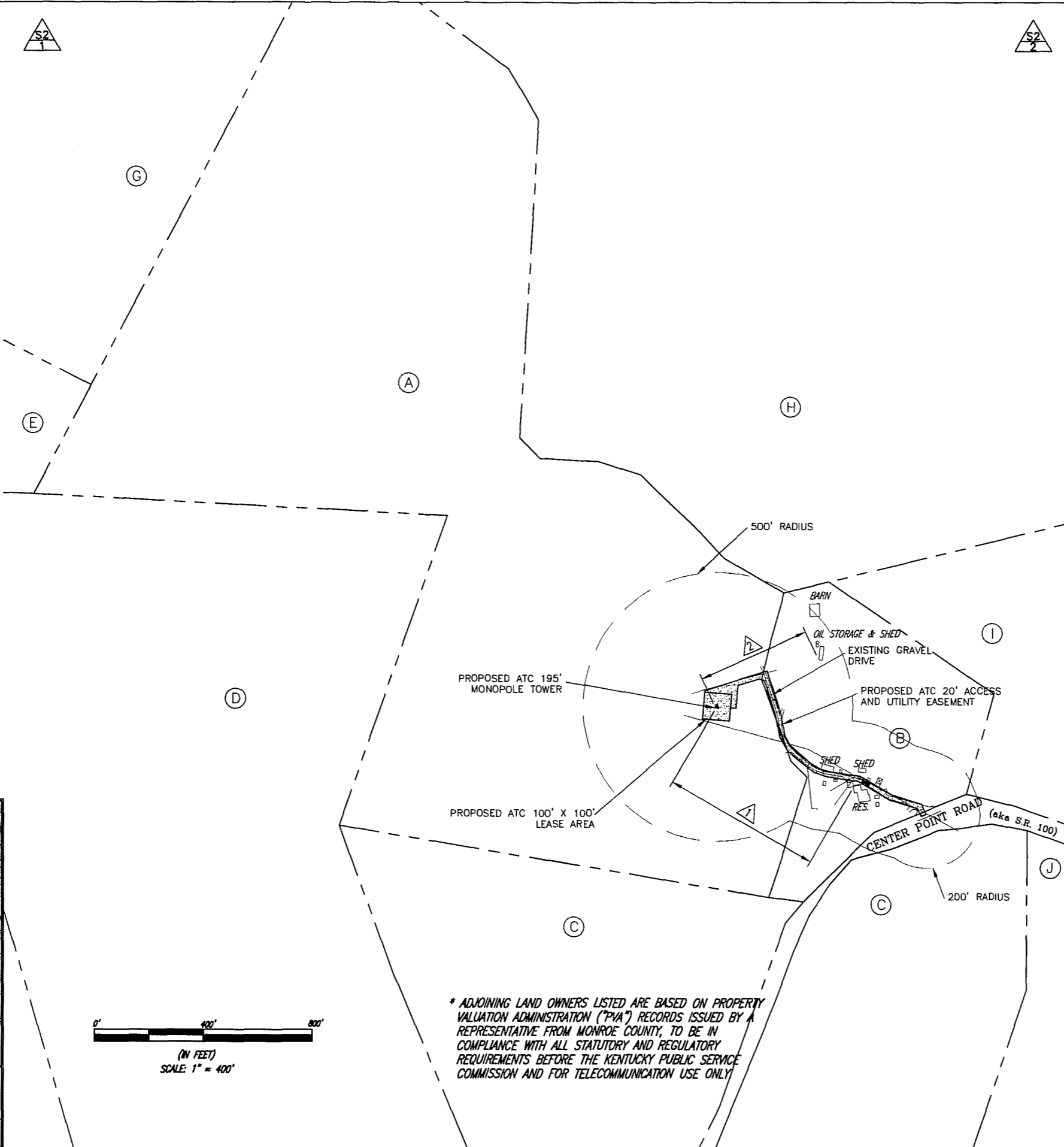
GRID NORTH BY G.P.S. OBSERVATION, ±10 SECONDS

NORTH IS BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SINGLE ZONE AND WAS DETERMINED BY COMPUTATION FROM G.P.S. OBSERVATION ON JUNE 19, 2013.



QUAD MAP
SCALE: 1"=2000'

U.S.G.S. 7 1/2 MINUTE QUAD MAP OF (QUAD MAP NAME)



0' 400' 800'
(IN FEET)
SCALE: 1" = 400'

* ADJOINING LAND OWNERS LISTED ARE BASED ON PROPERTY VALUATION ADMINISTRATION ("PVA") RECORDS ISSUED BY A REPRESENTATIVE FROM MONROE COUNTY, TO BE IN COMPLIANCE WITH ALL STATUTORY AND REGULATORY REQUIREMENTS BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION AND FOR TELECOMMUNICATION USE ONLY.

- (A) 77-17
JOHNNY GRAVES ET AL
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (B) 83-17
JOHNNIE G GRAVES
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (C) 83-18
PATRICIA COMER
8705 COUNTY HOUSE ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (D) 77-18
HERMAN L. JOHNSON
1997 OLD GLASGOW ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (E) 77-16
JOHNNIE G GRAVES
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (F) 83-17
JOHNNIE G GRAVES
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (G) 77-11
WILLA DEAN WHITE
4673 MESHACK ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (H) 77-09
JAMES LEE ELMORE
1215 HUDGINS HIGHWAY
SUMMERSVILLE, KY 42782
NO ZONING
- (I) 83-15
LUCAS & VALERIE GERALDS
8585 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (J) 83-20
STONEY MARTIN
2229 MT. HERMAN ROAD
MT. HERMON, KY 42157
NO ZONING

TOWER TO STRUCTURE DIST.
584' ±
411' ±



Formerly F.S. Land & T. Alan Neal Company
Land Surveyors and Consulting Engineers
428 E Wornock Street
Louisville, KY 40217
Phone: (502) 835-8866 (502) 836-8111
Fax: (502) 836-8283

SITE NUMBER:
AT&T SITE #144243/ATC #281329

SITE NAME:
CENTER POINT

SITE ADDRESS:
8721 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

LEASE AREA:
10,000 SQ.FT.

PROPERTY OWNER:
GRAVES, JOHNNY ET AL
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

PARCEL NUMBER:
77-17

PARCEL NUMBER:
83-17

SOURCE OF TITLE:
DEED 79, PAGE 871
DEED 50, PAGE 67

DWG BY:	CHKD BY:	DATE:
JMW	FSSR	06.22.13

FSTAN PROJECT NO.:
13-8588

SHEET 1 OF 2

REVISIONS:

12-12-13 REVISED BORDER

DATE COMPILED: 08-21-18
ABUTTERS MAP

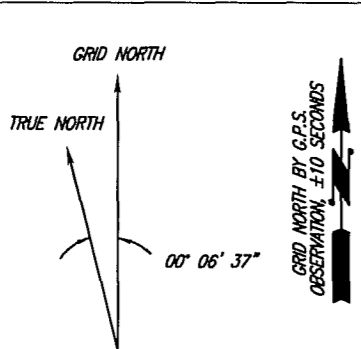
CENTER POINT
AT&T SITE #144243/ATC #281329
SITE ADDRESS: 8721 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
OWNER ADDRESS: 8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

SHEET 2

- LEASE AREA

- LEGAL DESCRIPTIONS

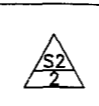
- FLOOD ZONE DATA



LINE LEGEND

	OVERHEAD ELECTRIC
	UNDERGROUND GAS LINE
	UNDERGROUND WATER LINE
	OVERHEAD ELECTRIC & TELEPHONE LINE
	OVERHEAD TELEPHONE LINE
	DRAINAGE/STORM SEWER LINE
	EXISTING FENCE
	PROPOSED FENCE
	SUBJECT PROPERTY BOUNDARY
	RIGHT OF WAY CENTERLINE

NOTE: SYMBOLS, ABBREVIATIONS, OR LIFESTYLES DO NOT NECESSARILY APPEAR ON DRAWING(S). USE ONLY AS APPLICABLE



LEGAL DESCRIPTIONS:

This is a description for American Tower Corporation, of a lease area to be located on the property of Johnny & Gloydell Graves & Interest, Johnny Wayne Graves, Jr. & Interest and David Graves & Interest, which is further described as follows:

LEASE AREA

Land situated in Monroe County, Kentucky and being a located on the conveyed to Johnny Graves et al and recorded in Deed Book 79, Page 871 in the Office of the Clerk, of the Monroe County Court more particularly described as follows:

Commencing at a set #5 iron rod with cap stamped "FSTAN 3282" being the Southwest corner of a Proposed Lease Area located at KY State Plane coordinate Northing 3424603.82 (US Foot) and Easting 4973824.66 (US Foot) as defined by the Kentucky State Plane Coordinate System, Single Zone as established by Global Positioning Systems (GPS) survey ties to the National Geodetic Reference System established by the National Geodetic Survey formerly the U.S. Coast & Geodetic Survey by measurements to PID Station DK7555' (datum NAD83, 2011 adjustment) designated as DALE HOLLOW SRP CORRS ARP; said coordinate point being the point of beginning of the Proposed Lease Area described here;

Thence North 04 degrees, 22 minutes, 22 seconds East (basis of bearings as defined by the Kentucky State Plane Coordinate System Single Zone) 100 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 85 degrees, 37 minutes, 38 seconds East 100 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 04 degrees 22 minutes, 22 seconds West 100 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 85 degrees, 37 minutes, 38 seconds West 100 feet to the point of beginning, containing 10,000.00 square feet (0.229 acres).

VARIABLE WIDTH ACCESS & UTILITY EASEMENT

Being a variable wide Rights of way extending from the North margin of Ky State Hwy 100 to the North & Northeast margin of the Proposed Lease Area and being at Unes 20 feet wide and described more particularly as follows:

Commencing at a set #5 iron rod with cap stamped "FSTAN 3282" being the Southwest corner of a Proposed Lease Area located at KY State Plane coordinate Northing 3424603.82 (US Foot) and Easting 4973824.66 (US Foot) as defined by the Kentucky State Plane Coordinate System, Single Zone as established by Global Positioning Systems (GPS) survey ties to the National Geodetic Reference System established by the National Geodetic Survey formerly the U.S. Coast & Geodetic Survey by measurements to PID Station DK7555' (datum NAD83, 2011 adjustment) designated as DALE HOLLOW SRP CORRS ARP; thence North 04 degrees, 22 minutes, 22 seconds East 100 feet to a set #5 iron rod with cap stamped "FSTAN 3282" said point being the point of beginning of the Variable Access & Utility Easement described here;

Thence North 04 degrees, 22 minutes, 22 seconds East 4.73 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 71 degrees, 51 minutes, 38 seconds East 240.10 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 17 degrees, 19 minutes, 07 seconds East 170.15 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 09 degrees, 52 minutes, 04 seconds East 78.91 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 31 degrees, 07 minutes, 58 seconds East 47.79 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 46 degrees, 59 minutes, 44 seconds East 37.12 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 52 degrees, 04 minutes, 11 seconds East 66.62 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 69 degrees, 42 minutes, 18 seconds East 39.28 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 81 degrees, 19 minutes, 49 seconds East 124.08 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 85 degrees, 37 minutes, 38 seconds East 124.08 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 72 degrees, 33 minutes, 48 seconds East 112.63 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 22 degrees, 55 minutes, 27 seconds East 40.27 feet to a set nail in the centerline of KY State Hwy 100; thence following said centerline South 67 degrees, 04 minutes, 33 seconds West 20.00 feet to a set nail; thence leaving said centerline North 22 degrees, 55 minutes, 27 seconds West 31.02 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 72 degrees, 33 minutes, 48 seconds West 105.83 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 72 degrees, 33 minutes, 48 seconds West 138.77 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 81 degrees, 19 minutes, 49 seconds West 122.30 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 89 degrees, 42 minutes, 18 seconds West 44.42 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 52 degrees, 04 minutes, 11 seconds West 90.60 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 46 degrees, 59 minutes, 44 seconds West 40.79 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 09 degrees, 52 minutes, 04 seconds West 81.36 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 17 degrees, 19 minutes, 07 seconds West 128.27 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence following a curve to the left having a radius of 20.00 feet, arc length of 31.70 feet and a chord of North 62 degrees, 43 minutes, 45 seconds West 28.49 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence South 71 degrees, 51 minutes, 38 seconds West 77.91 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence North 85 degrees, 37 minutes, 38 seconds West 20.00 feet to a set #5 iron rod with cap stamped "FSTAN 3282" located in the East line of the Proposed Lease Area; thence following said line North 04 degrees, 22 minutes, 22 seconds East 50.00 feet to a set #5 iron rod with cap stamped "FSTAN 3282"; thence following the north line of said Proposed Lease Area North 85 degrees, 37 minutes, 38 seconds East 100.00 feet to the point of beginning, containing 24035 square feet (0.55 acres).

COORDINATE POINT LOCATION

NAD 1983
 LATITUDE: 36° 43' 41.33"
 LONGITUDE: 85° 34' 13.59"
 NAD 1988
 ELEVATION: 876±
 STATE PLANE COORDINATE SINGLE ZONE
 (BLUE MARBLE GEOGRAPHIC CALCULATOR VERSION 3.0)
 NORTHING: 3424649.890
 EASTING: 4973878.327

NORTH IS BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SINGLE ZONE AND WAS DETERMINED BY COMPUTATION FROM G.P.S. OBSERVATION ON JUNE 19, 2013.

SURVEYORS NOTES

SOURCE OF BEARING IS A G.P.S. OBSERVATION ON JUNE 18, 2013.

SITE SHOWN SUBJECT TO RIGHT OF HWYS AND EASEMENTS SHOWN HEREON OR NOT.

NO SEARCH OF PUBLIC RECORDS HAS BEEN PERFORMED BY THIS FIRM TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE PARENT TRACT.

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.

EXISTING CONTOURS ARE AT ONE FOOT INTERVALS.

PROJECT BENCHMARK

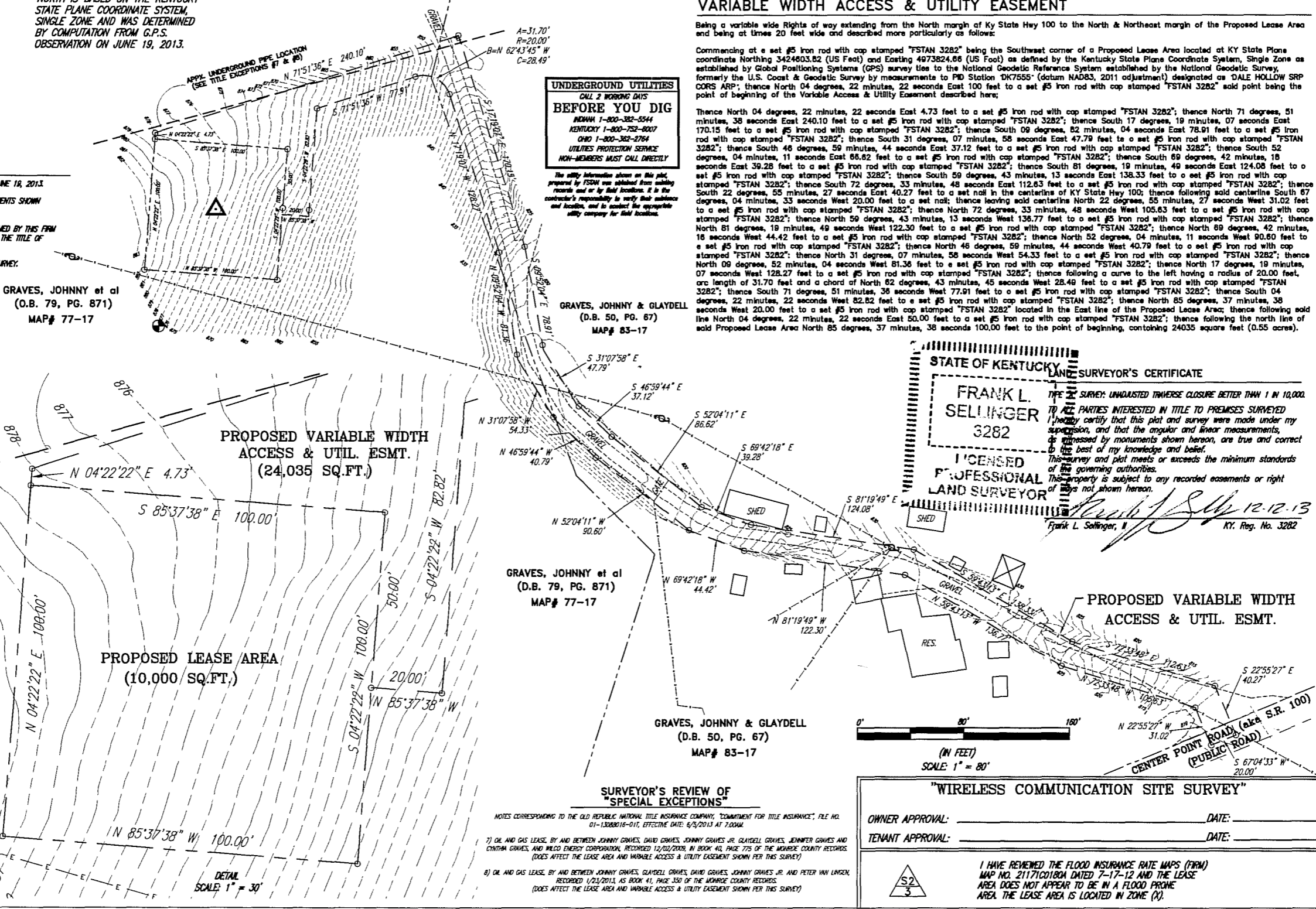
NORTH: 3424560.868
 EAST: 4973835.093
 ELEVATION: 876.96'
 LOCATION: BEING A SET IRON ROD 44± SOUTH OF THE WEST CORNER OF THE PROPOSED LEASE AREA.

SYMBOL LEGEND

	WOOD POWER POLE
	CONCRETE POWER POLE
	METAL TRAFFIC POLE
	LIGHT POLE
	GUY POLE
	TELEPHONE PEDESTAL
	GUY ANCHOR
	MANHOLE
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	ELECTRIC BOX
	F.P. FENCE POST
	SPOT ELEVATION
	SET #5 REBAR (UNLESS OTHERWISE NOTED)
	EXISTING #5 REBAR (UNLESS OTHERWISE NOTED)

ABBREVIATIONS

EP	EDGE OF PAVEMENT
ROW	RIGHT OF WAY
CL	CENTERLINE
RCP	REINFORCED CONCRETE PIPE
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
R	SUBJECT PROPERTY LINE
TC	TOP OF CURB
BC	BOTTOM OF CURB
POB	POINT OF BEGINNING
PC	IRON PIN CAPPED



FSTAN

Formerly F.S. Land & T. Alan Neal Company

Land Surveyors and Consulting Engineers

428 E Wornock Street
 Louisville, KY 40217

Phone: (502) 635-5886 (502) 636-5111
 Fax: (502) 636-5283

SITE NUMBER:
 AT&T SITE #144243/ATC #281329

SITE NAME:
 CENTER POINT

SITE ADDRESS:
 8721 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

LEASE AREA:
 10,000 SQ.FT.

PROPERTY OWNER:
 GRAVES, JOHNNY ET AL
 8475 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

PARCEL NUMBER:
 77-17

PARCEL NUMBER:
 83-17

SOURCE OF TITLE:
 DEED 79, PAGE 871
 DEED 50, PAGE 67

DWG BY: JMW
CHKD BY: FSSR
DATE: 06.22.13

FSTAN PROJECT NO.:
 13-8588

SHEET 2 OF 2

REVISIONS:

VERIFY PUBLIC ROAD 08.14.13
 12-12-13 REVISED BORDER

DATE COMPILED: 08-21-13

VACANT LAND

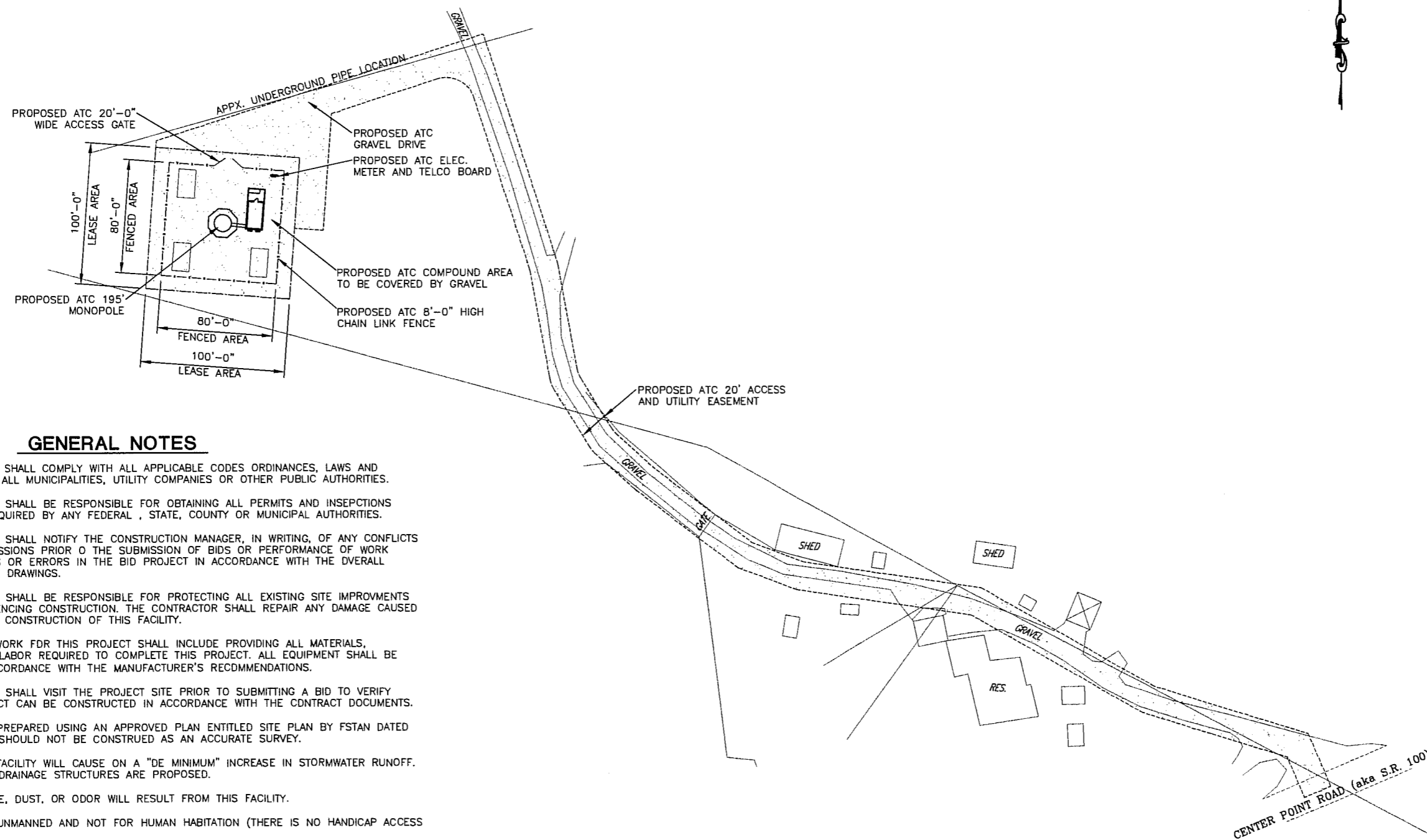
CENTER POINT
 AT&T SITE #144243/ATC #281329
 SITE ADDRESS: 8721 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167
 OWNER ADDRESS: 8475 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

"WIRELESS COMMUNICATION SITE SURVEY"

OWNER APPROVAL: _____ DATE: _____

TENANT APPROVAL: _____ DATE: _____

I HAVE REVIEWED THE FLOOD INSURANCE RATE MAPS (FIRM) MAP NO. 21171C018A DATED 7-17-12 AND THE LEASE AREA DOES NOT APPEAR TO BE IN A FLOOD PRONE AREA. THE LEASE AREA IS LOCATED IN ZONE (X).



GENERAL NOTES

- 1.) THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC AUTHORITIES.
- 2.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSEPCIONS THAT MAY BE REQUIRED BY ANY FEDERAL , STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- 3.) THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS ERRORS, OR OMISSIONS PRIOR O THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK MINOR OMISSIONS OR ERRORS IN THE BID PROJECT IN ACCORDANCE WITH THE OVERALL INTENT OF THESE DRAWINGS.
- 4.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
- 5.) THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECDMMENDATIONS.
- 6.) THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CDNTRACT DOCUMENTS.
- 7.) THIS PLAN WAS PREPARED USING AN APPROVED PLAN ENTITLED SITE PLAN BY FSTAN DATED 06-13-13 AND SHOULD NOT BE CONSTRUED AS AN ACCURATE SURVEY.
- 8.) THE PROPOSED FACILITY WILL CAUSE ON A "DE MINIMUM" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
- 9.) NO NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
- 10.) THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (THERE IS NO HANDICAP ACCESS REQUIRED)
- 11.) THE FACILITY IS UNMANNED AND DOES NOT REQUIRED POTABLE WATER OR SANITARY SERVICE.
- 12.) POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.
- 13.) CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.
- 14.) MDUNTS AND ANTENNA ARE DESIGNED TO MEET EIA/TIA-222-G AS PER IBC 2009 REQUIREMENTS.
- 15.) ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
- 16.) CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
- 17.) IF ANY PIPING EXIST BENEATH THE SITE AREA, CONTRACTOR MUST LOCATE IT AND CONTACT OWNERS REPRESENTATIVE.
- 18.) CONSTRUCTION TO COMMENCE UPON COMPLETION OF A PASSING STRUCTURAL ANALYSIS. STRUCTURAL ANALYSIS TO BE PERFORMED BY OTHERS.



SITE LAYOUT
SCALE: 1"=80'

Walter C. Martin



FSTAN
Formerly F.S. Land & T. Alan Neal Company
Land Surveyors and Consulting Engineers
488 E. Warwick Street
Lexington, KY 40517
Phone: (606) 638-8886 (606) 638-8911
Fax: (606) 638-8883

PROPERTY OWNER:
JOHNNY GRAVES ET AL.
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

SITE ADDRESS:
8721 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

SITE NUMBER:
AT&T SITE #144243/ATC #281329

REVISIONS	DATE	REV. TYPE & COMP. SIZE
06-16-13	REVISED DRAWINGS	
08-26-13	REVISED COORDINATES	
10-02-13	REVISED FINAL ZONE	
12-12-13	REVISED SITE ADDRESS	
12-16-13	REVISED SITE ADDRESS	

DATE COMPLETED: 08-28-13

SITE NAME: CENTER POINT	SITE LAYOUT	DRAWN BY: SMF	CHECKED BY: FS II	DATE: 06-25-13
		FSTAN PROJECT NO.: 13-8580		

C-1



FSTan
 Formerly F.S. Land & T. Alan Neal Company
 Land Surveyors and Consulting Engineers
 488 E. Warwick Street
 Louisville, KY 40217
 Phone: (502) 638-0886 (502) 638-0111
 Fax: (502) 638-0883

PROPERTY OWNER:
 JOHNNY GRAVES ET AL.
 8475 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

SITE ADDRESS:
 8721 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

SITE NUMBER:
 AT&T SITE #144243/ATC #281329

REVISIONS	DATE	REV. TYPE & COMP. SIZE
09-16-13		REVISED DRAWINGS
09-26-13		REVISED COORDINATES
10-02-13		REVISED FINAL JOB
12-12-13		REVISED SITE ADDRESS
12-16-13		REVISED SITE ADDRESS

DATE COMPLETED: 08-20-13

SITE NAME: CENTER POINT

COMPOUND PLAN

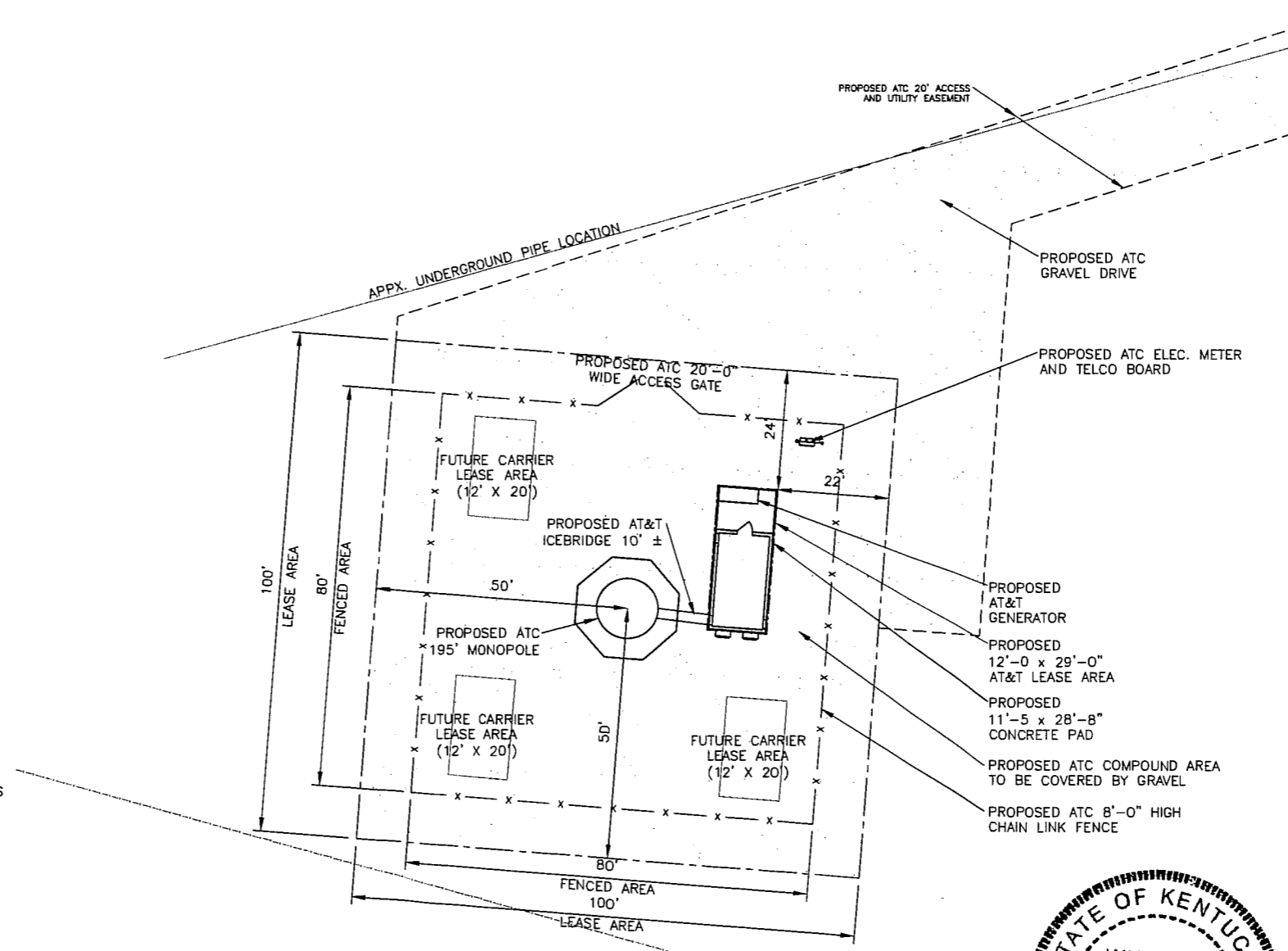
DRAWN BY: SMF
 CHECKED BY: FS II
 DATE: 06-25-13

FSTAN PROJECT NO.: 13-8590

C1-1

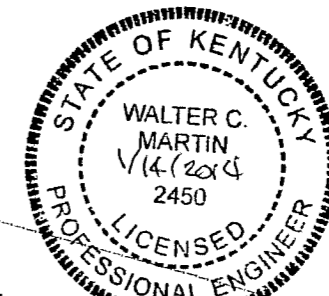
GENERAL NOTES

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- 4.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
- 5.) THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 6.) THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 7.) THIS PLAN WAS PREPARED USING AN APPROVED PLAN ENTITLED SITE PLAN BY FSTAN DATED 06-13-13 AND SHOULD NOT BE CONSTRUED AS AN ACCURATE SURVEY.
- 8.) THE PROPOSED FACILITY WILL CAUSE ON A "DE MINIMUM" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
- 9.) NO NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
- 10.) THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (THERE IS NO HANDICAP ACCESS REQUIRED)
- 11.) THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
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- 18.) CONSTRUCTION TO COMMENCE UPON COMPLETION OF A PASSING STRUCTURAL ANALYSIS. STRUCTURAL ANALYSIS TO BE PERFORMED BY OTHERS.

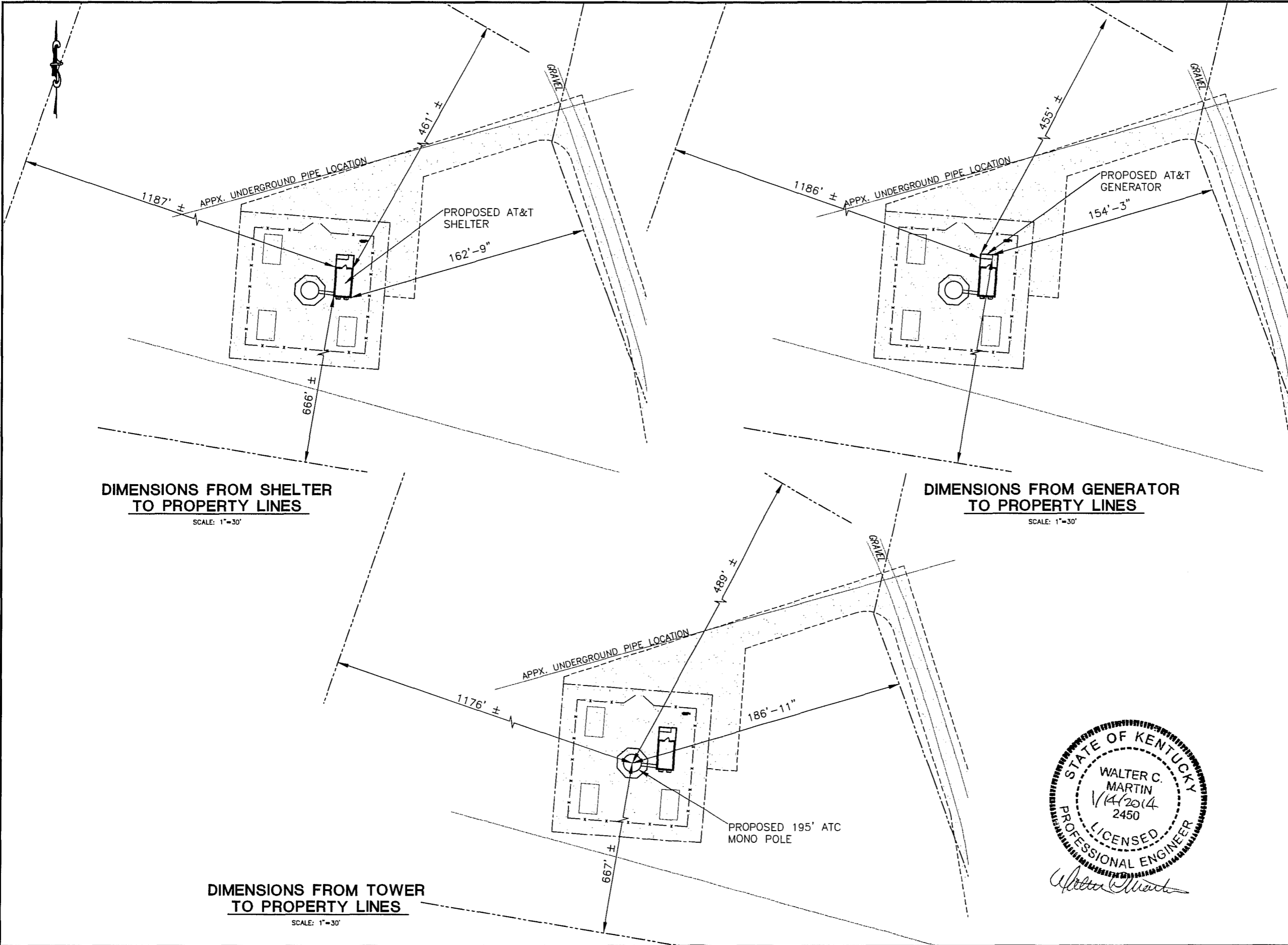


COMPOUND PLAN

SCALE: 1"=30'



Walter C. Martin



DIMENSIONS FROM SHELTER TO PROPERTY LINES

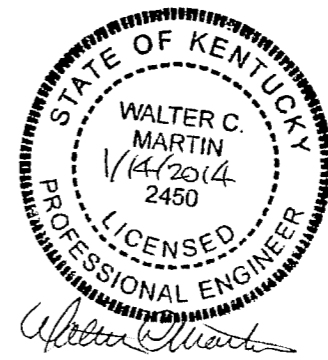
SCALE: 1"=30'

DIMENSIONS FROM GENERATOR TO PROPERTY LINES

SCALE: 1"=30'

DIMENSIONS FROM TOWER TO PROPERTY LINES

SCALE: 1"=30'



FSTAN
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 Louisville, KY 40217
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 Fax: (502) 638-8883

PROPERTY OWNER:
 JOHNNY GRAVES ET AL.
 8475 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

SITE ADDRESS:
 8721 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

SITE NUMBER:
 AT&T SITE #144243/ATC #281329

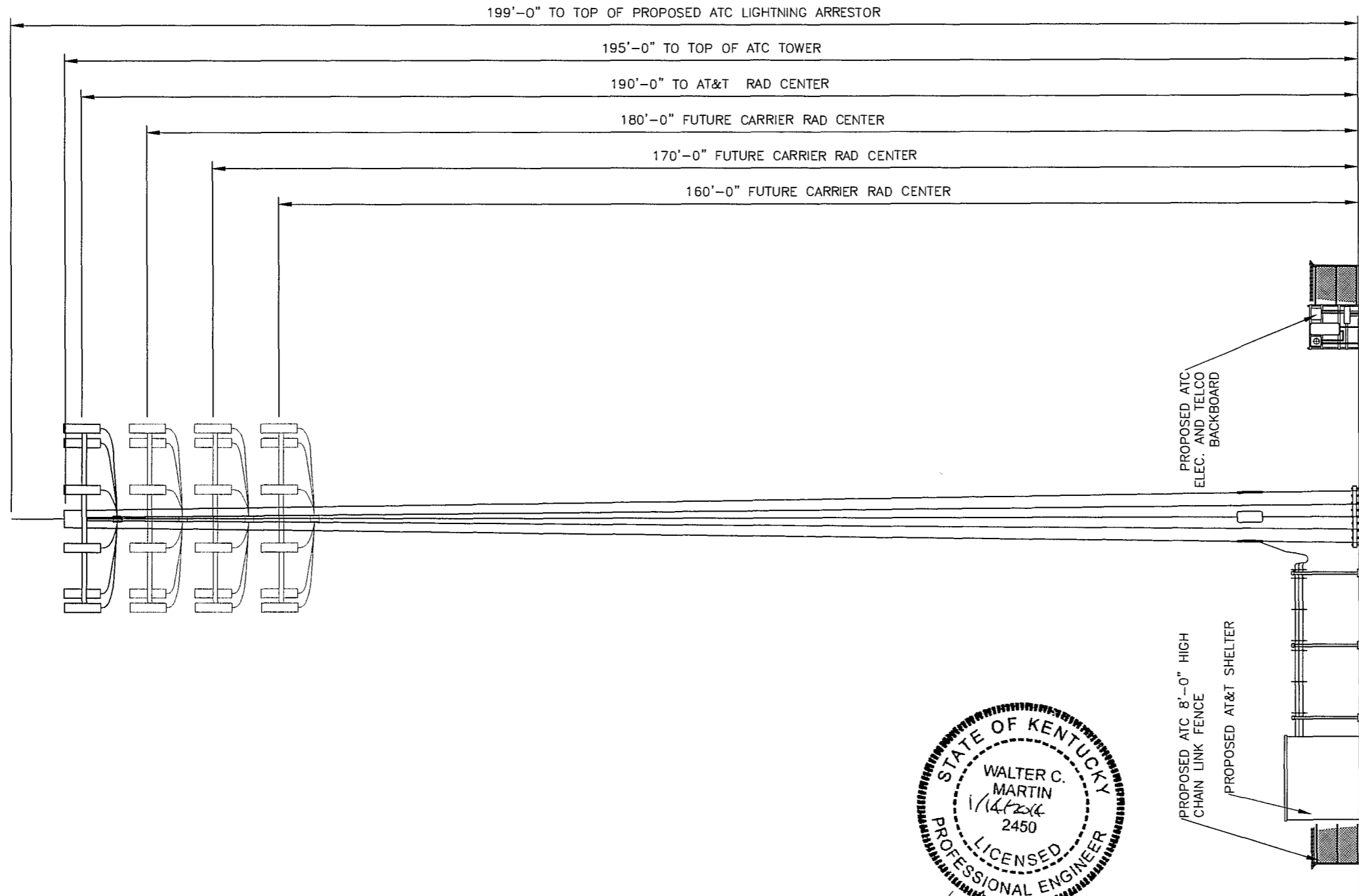
REVISIONS	DATE	REV. TYPE & COMP.	SIZE
08-16-13		REVISED DRAWINGS	
08-26-13		REVISED COORDINATES	
10-02-13		REVISED FINAL JOB	
12-12-13		REVISED SITE ADDRESS	
12-16-13		REVISED SITE ADDRESS	

DATE COMPILED: 08-28-13

SITE NAME: CENTER POINT	DIMENSIONS TO PROPERTY LINES	DRAWN BY: SMF	CHECKED BY: FS II	DATE: 06-25-13

FSTAN PROJECT NO.:
 13-8590

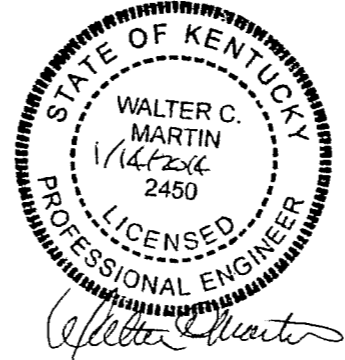
C1-2



TOWER ELEVATION

NOT TO SCALE

NOTE: THE ELEVATIONS SHOWN ON THIS SHEET ARE FOR PICTORIAL PURPOSES ONLY. THIS DESIGN WAS PROVIDED BY OTHERS. REFER TO TOWER PLANS FOR TOWER DESIGN.



PROPERTY OWNER:
JOHNNY GRAVES ET AL.
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

SITE ADDRESS:
8721 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

SITE NUMBER:
AT&T SITE #144243/ATC #281329

REVISIONS	DATE	REV. TYPE & COMP. SIZE
08-16-13		REV. TWR. TYPE & COMP. SIZE
08-26-13		REVISED DRAWINGS
10-02-13		REVISED COORDINATES
12-12-13		REVISED FINAL ZONE
12-16-13		REVISED SITE ADDRESS

DATE COMPLETED: 08-20-13

SITE NAME: CENTER POINT	TOWER ELEVATION	DRAWN BY: SMF	CHECKED BY: FS II	DATE: 06-25-13
		DATE COMPLETED: 08-20-13		

FSTAN PROJECT NO.:
13-8590

C-2

EXHIBIT C
TOWER AND FOUNDATION DESIGN

Michael F. Plahovinsak, P.E.

December 2, 2013

American Tower Corporation

Attn: Ron Rohr

Re: Proposed 195-ft Monopole
Located in Monroe Co., KY: Site #281329 – Center Point
MFP #23513-647 / TAPP TP-11866

Dear Mr. Rohr:

I understand that there may be some concern on the part of local building officials regarding the potential for failure of the proposed communication monopole. Communication structures are designed in accordance with the Telecommunications Industry Association ANSI/TIA-222-G, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

I have designed this monopole to withstand a basic wind speed of 90 mph as recommended by ANSI/TIA-222-G for Monroe County. The design also conforms to the requirements of the 2013 Kentucky Building Code.

Due to the numerous safety factors incorporated into the design standard, failure of the structure would not be expected to occur at the exact moment the design wind speed is exceeded. Therefore, it is extremely rare to encounter a failure of a monopole tower. Statistically, loads reaching 2x the design wind pressures would be required to cause a failure of the structure, where total devastation of the surrounding area would also occur. Most failures of this nature occur due to an Act of God, uncontrollable acts of vandalism, or gross neglect of routine maintenance.

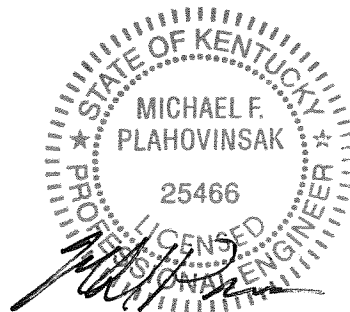
Therefore, theoretically, this structure may be considered to be designed for a 0-ft fall radius based on rarity of failures, and the requirements of the Building Code and the ANSI/TIA-222 Standard.

The structure has been designed with all of the applicable factors as required by the code. Communication poles are safe structures with a long history of reliable operation.

I hope this review of the monopole design has given you a greater degree of comfort regarding the design capacity inherent in pole structures. If you have any additional questions please call me at 614-398-6250 or email mike@mfpeng.com.

Sincerely,

Michael F. Plahovinsak, P.E.
Professional Engineer



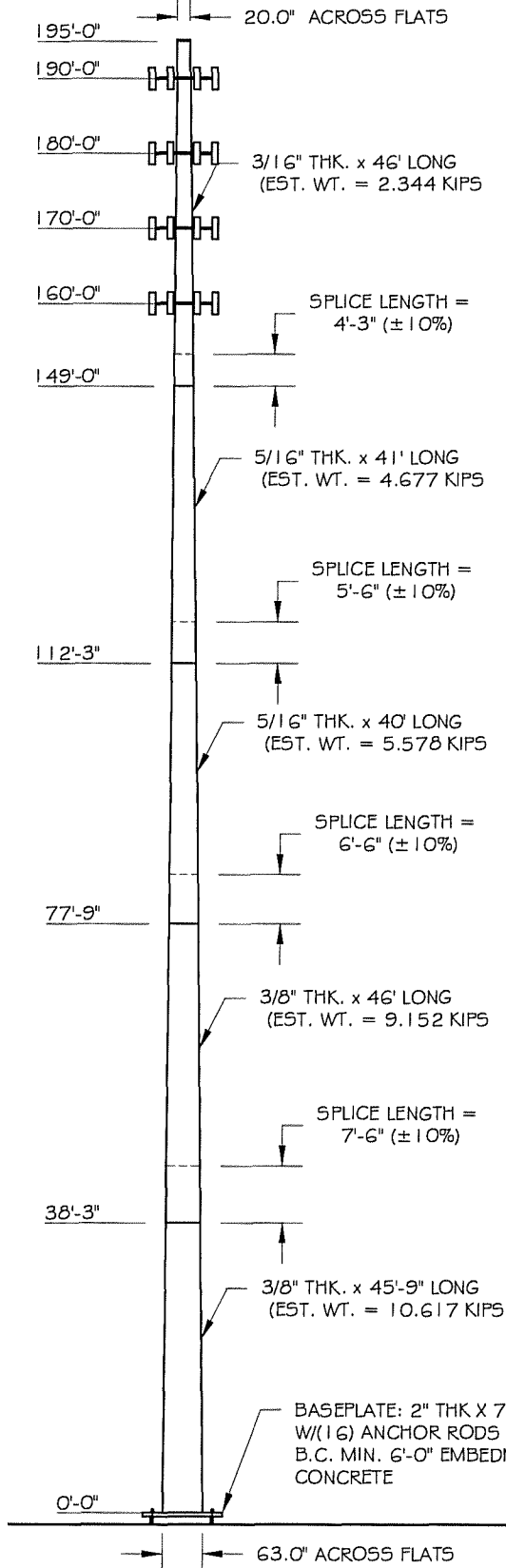
12.2.2013



TransAmerican Power Products, Inc.

2427 Kelly Lane
Houston, Texas 77066

PH: 281-444-8277 / FX: 281-444-7270



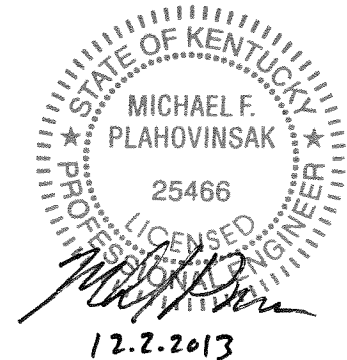
Page 1 of 1	Job Number: 23513-647
Eng: MFP	Customer Ref: TP-11866
	Date: 12/2/2013
Structure:	195-FT MONOPOLE
Site:	281329 CENTER POINT
Location:	MONROE CO., KY / 36°43'41.33", -85°34'13.59"
Owner:	AMERICAN TOWER
Revision No.:	Revision Date:

DESIGN			
Building Code: 2013 KENTUCKY BUILDING CODE			
Design Standard: ANSI/TIA-222-G-2			
Wind Speed Load Cases: 3-SEC. GUSTED WIND SPEED			
Load Case #1: 90 MPH Design Wind Speed			
Load Case #2: 30 MPH Wind with 0.75" Ice Accumulation			
Load Case #3: 60 MPH Service Wind Speed			
Structure Class	Exposure Cat.	Topography Cat.	Crest Height
II	C	I	

EQUIPMENT LIST	
Elev.	Description
190	(12) PANEL ANTENNAS (105 FT2 / 1800 LBS)
190	T-ARM MOUNTS
180	(12) PANEL ANTENNAS (105 FT2 / 1800 LBS)
180	T-ARM MOUNTS
170	(12) PANEL ANTENNAS (105 FT2 / 1800 LBS)
170	T-ARM MOUNTS
160	(12) PANEL ANTENNAS (105 FT2 / 1800 LBS)
160	T-ARM MOUNTS

ANTENNA FEED LINES ROUTED ON THE INSIDE OF THE POLE

STRUCTURE PROPERTIES					
Cross-Section: 18-SIDED			Taper: 0.23269 in/ft		
Shaft Steel: ASTM A572 GR 65			Baseplate Steel: ASTM A572 GR 60		
Anchor Rods: 2.25 in. A615 GR. 75 X 7'-0" LONG					
Sect.	Length (ft)	Thickness (in)	Splice (ft)	Top Dia. (in)	Bot Dia. (in)
1	46.00	0.1875	4.25	20.00	30.70
2	41.00	0.3125	5.50	29.34	38.88
3	40.00	0.3125	6.50	36.98	46.28
4	46.00	0.3750	7.50	44.15	54.85
5	45.75	0.3750		52.35	63.00



MICHAEL F. PLAHOVINSAK, P.E., LIC. #25466
614-398-6250 / mike@mfpowers.com

BASE REACTIONS FOR FOUNDATION DESIGN

Moment: 5550 ft-kip
Shear: 40 kip
Axial: 62 kip

tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mjfeng.com	Job 195-R Monopole - MFP #23513-647	Page 1 of 5
	Project 281329, Center Point	Date 13:09:28 11/06/13
	Client TAPP (TP-11866)	Designed by Mike

tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mjfeng.com	Job 195-ft Monopole - MFP #23513-647	Page 2 of 5
	Project 281329, Center Point	Date 13:09:28 11/06/13
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Tower Input Data

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

The following design criteria apply:

Tower is located in Monroe County, Kentucky.

Basic wind speed of 90 mph.

Structure Class II.

Exposure Category C.

Topographic Category 1.

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.

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

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

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

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	195.00-149.00	46.00	4.25	18	20.0000	30.7000	0.1875	0.7500	A572-65 (65 ksi)
L2	149.00-112.25	41.00	5.50	18	29.3364	38.8800	0.3125	1.2500	A572-65 (65 ksi)
L3	112.25-77.75	40.00	6.50	18	36.9748	46.2800	0.3125	1.2500	A572-65 (65 ksi)
L4	77.75-38.25	46.00	7.50	18	44.1429	54.8500	0.3750	1.5000	A572-65 (65 ksi)
L5	38.25-0.00	45.75		18	52.3543	63.0000	0.3750	1.5000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁶	IvQ in ³	w	w/l
L1	20.3085	11.7909	584.7409	7.0334	10.1600	57.5532	1170.2512	5.8966	3.1900	17.013
	31.1736	18.1588	2135.8907	10.8319	15.5956	136.9547	4274.5918	9.0811	5.0732	27.057
L2	30.7935	28.7881	3063.8132	10.3035	14.9029	205.5851	6131.6579	14.3968	4.6132	14.762
	39.4798	38.2541	7188.8407	13.6915	19.7510	363.9728	14387.1406	19.1307	6.2929	20.137
L3	38.8444	36.3644	6175.2167	13.0151	18.7832	328.7631	12358.5588	18.1856	5.9576	19.064
	46.9939	45.5940	12171.5825	16.3185	23.5102	517.7141	24359.1808	22.8013	7.5953	24.305
L4	46.3602	52.0947	12607.8995	15.5376	22.4246	562.2354	25232.3888	26.0523	7.1092	18.958
	55.6961	64.8389	24309.0147	19.3386	27.8638	872.4228	48650.0159	32.4256	8.9936	23.983
L5	54.9340	61.8683	21118.6593	18.4526	26.5960	794.0548	42265.1070	30.9400	8.5541	22.812
	63.9719	74.5394	36933.3632	22.2319	32.0040	1154.0233	73915.3243	37.2768	10.4280	27.808

Feed Line/Linear Appurtenances - Entered As Area

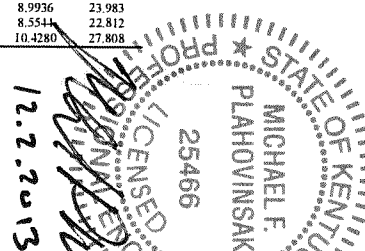
Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C _w A _s		Weight plf
						ft ² /ft	plf	
1 5/8"	C	No	Inside Pole	190.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	180.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	170.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	160.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Hors Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _w A _s		Weight K		
						Front ft ²	Side ft ²			
(12) Panel w/ mounting (105 ft / 1800 lbs)	C	None			0.0000	190.00	No Ice	105.00	105.00	1.80
							1/2" Ice	125.00	125.00	2.34
							1" Ice	145.00	145.00	2.88
(12) Panel w/ mounting (105 ft / 1800 lbs)	C	None			0.0000	180.00	No Ice	105.00	105.00	1.80
							1/2" Ice	125.00	125.00	2.34
							1" Ice	145.00	145.00	2.88
(12) Panel w/ mounting (105 ft / 1800 lbs)	C	None			0.0000	170.00	No Ice	105.00	105.00	1.80
							1/2" Ice	125.00	125.00	2.34
							1" Ice	145.00	145.00	2.88
(12) Panel w/ mounting (105 ft / 1800 lbs)	C	None			0.0000	160.00	No Ice	105.00	105.00	1.80
							1/2" Ice	125.00	125.00	2.34
							1" Ice	145.00	145.00	2.88

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 90 deg - No Ice
5	0.9 Dead+1.6 Wind 90 deg - No Ice
6	1.2 Dead+1.6 Wind 180 deg - No Ice
7	0.9 Dead+1.6 Wind 180 deg - No Ice
8	1.2 Dead+1.0 Ice+1.0 Temp
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
12	Dead+Wind 0 deg - Service
13	Dead+Wind 90 deg - Service
14	Dead+Wind 180 deg - Service



tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mjpeng.com	Job 195-ft Monopole - MFP #23513-647	Page 3 of 5
	Project 281329, Center Point	Date 13:09:28 11/06/13
	Client TAPP (TP-11866)	Designed by Mike

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Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment
L1	195 - 149	Pole	Max Tension	2	0.00	0.00	-0.00
			Max. Compression	8	-23.14	0.00	0.00
			Max. Mx	4	-9.59	-545.05	0.00
			Max. My	2	-9.59	0.00	545.05
			Max. Vy	4	25.12	-545.05	0.00
L2	149 - 112.25	Pole	Max. Vx	2	-25.12	0.00	545.05
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-33.89	0.00	0.00
			Max. Mx	4	-17.91	-1498.37	0.00
			Max. My	2	-17.91	0.00	1498.37
L3	112.25 - 77.75	Pole	Max. Vy	4	28.59	-1498.37	0.00
			Max. Vx	2	-28.59	0.00	1498.37
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-46.35	0.00	0.00
			Max. Mx	4	-27.70	-2512.27	0.00
L4	77.75 - 38.25	Pole	Max. My	2	-27.70	0.00	2512.27
			Max. Vy	4	31.84	-2512.27	0.00
			Max. Vx	2	-31.84	0.00	2512.27
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-64.12	0.00	0.00
L5	38.25 - 0	Pole	Max. Mx	4	-41.85	-3810.90	0.00
			Max. My	2	-41.85	0.00	3810.90
			Max. Vy	4	35.48	-3810.90	0.00
			Max. Vx	2	-35.48	0.00	3810.90
			Max Tension	1	0.00	0.00	0.00
Max. Compression	8	-88.03	0.00	0.00			
Max. Mx	4	-61.36	-5516.65	0.00			
Max. My	2	-61.36	0.00	5516.65			
Max. Vy	4	38.76	-5516.65	0.00			
Max. Vx	2	-38.76	0.00	5516.65			

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	195 - 149	49.102	12	2.3338	0.0000
L2	153.25 - 112.25	29.628	12	1.9691	0.0000
L3	117.75 - 77.75	16.763	12	1.4527	0.0000
L4	84.25 - 38.25	8.243	12	0.9418	0.0000
L5	45.75 - 0	2.416	12	0.4806	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.00	(12) Panel w/ mounting (105 ft / 1800 lbs)	12	46.656	2.2978	0.0000	30322
180.00	(12) Panel w/ mounting (105 ft / 1800 lbs)	12	41.804	2.2232	0.0000	10106
170.00	(12) Panel w/ mounting (105 ft / 1800 lbs)	12	37.071	2.1405	0.0000	6063
160.00	(12) Panel w/ mounting (105 ft / 1800 lbs)	12	32.537	2.0443	0.0000	4330

Maximum Tower Deflections - Design Wind

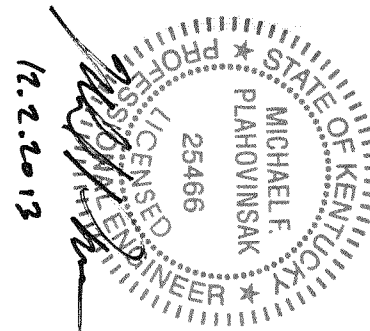
Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	195 - 149	198.293	4	9.4403	0.0000
L2	153.25 - 112.25	119.814	4	7.9696	0.0000
L3	117.75 - 77.75	67.854	4	5.8835	0.0000
L4	84.25 - 38.25	33.383	4	3.8158	0.0000
L5	45.75 - 0	9.783	4	1.9468	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.00	(12) Panel w/ mounting (105 ft / 1800 lbs)	4	188.441	9.2953	0.0000	7884
180.00	(12) Panel w/ mounting (105 ft / 1800 lbs)	4	168.895	8.9945	0.0000	2625
170.00	(12) Panel w/ mounting (105 ft / 1800 lbs)	4	149.824	8.6610	0.0000	1571
160.00	(12) Panel w/ mounting (105 ft / 1800 lbs)	4	131.545	8.2731	0.0000	1118

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _w ft	K/r	A in ²	P _w K	φP _w K	Ratio P _w / φP _w
L1	195 - 149 (1)	TP30.7x20x0.1875	46.00	0.00	0.0	17.5704	-9.59	1117.50	0.009
L2	149 - 112.25 (2)	TP38.88x29.3364x0.3125	41.00	0.00	0.0	36.9843	-17.91	2615.06	0.007
L3	112.25 - 77.75 (3)	TP46.28x36.9748x0.3125	40.00	0.00	0.0	44.0942	-27.70	2929.35	0.009
L4	77.75 - 38.25 (4)	TP54.85x44.1429x0.375	46.00	0.00	0.0	62.7610	-41.85	4188.71	0.010
L5	38.25 - 0 (5)	TP63x52.3543x0.375	45.75	0.00	0.0	74.5394	-61.36	4608.55	0.013



tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com	Job 195-ft Monopole - MFP #23513-647	Page 5 of 5
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Michael F. Plahovinsak, P.E. 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 email: mike@mfpeng.com	Job 195-ft monopole - MFP #23513-0647	Page BP-G
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	Client TAPP (TP-11866)	Designed by Mike

Anchor Rod and Base Plate Calculation

ANSI/TIA-222-G-2

Factored Base Reactions:	Pole Shape:	Anchor Rods:	Base Plate:
Moment: 5517 ft-kips	18-Sided	(16) 2.25 in. A615 GR. 75	2 in. x 76 in. Round
Shear: 39 kips	Pole Dia. (D_p):	Anchor Rods Evenly Spaced	fy = 60 ksi
Axial: 61 kips	63.00 in	On a 70 in Bolt Circle	

Anchor Rod Calculation According to TIA-222-G section 4.9.9

$\phi = 0.80$ TIA 4.9.9
 $I_{bolts} = 9800.00 \text{ in}^2$ Moment of Inertia
 $P_u = 236 \text{ kips}$ Tension Force
 $V_u = 2 \text{ kips}$ Shear Force
 $R_{at} = 325.00 \text{ kips}$ Nominal Tensile Strength
 $\eta = 0.50$ (for dented type (d))

The following Interaction Equation Shall Be Satisfied:

$$\frac{P_u + \frac{V_u}{\eta}}{\phi R_{at}} \leq 1.0$$

0.928 ≤ 1

Base Plate Calculation According to TIA-222-G

$\phi = 0.90$ TIA 4.7
 $M_{PL} = 570.6 \text{ in-kip}$ Plate Moment
 $L = 12.4 \text{ in}$ Section Length
 $Z = 12.4 \text{ in-kip}$ Plastic Section Modulus
 $M_P = 742.2 \text{ in-kip}$ Plastic Moment
 $\phi M_n = 668.0 \text{ in-kip}$ Factored Resistance

Calculated Moment vs Factored Resistance

570.61 in-kip ≤ 668 in-kip

Anchor Rods Are Adequate 92.8%
 Base Plate is Adequate 85.4%

Pole Bending Design Data

Section No.	Elevation	Size	M_{ux}	ϕM_{ux}	Ratio	M_{uy}	ϕM_{uy}	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{ux}}$	kip-ft	kip-ft	$\frac{M_{uy}}{\phi M_{uy}}$
L1	195 - 149 (1)	TP30.7x20x0.1875	545.05	679.46	0.802	0.00	679.46	0.000
L2	149 - 112.25 (2)	TP38.88x29.3364x0.3125	1498.38	2004.06	0.748	0.00	2004.06	0.000
L3	112.25 - 77.75 (3)	TP46.28x36.9748x0.3125	2512.28	2680.07	0.937	0.00	2680.07	0.000
L4	77.75 - 38.25 (4)	TP54.85x44.1429x0.375	3810.90	4545.13	0.838	0.00	4545.13	0.000
L5	38.25 - 0 (5)	TP63x52.3543x0.375	5516.65	5945.56	0.928	0.00	5945.56	0.000

Pole Shear Design Data

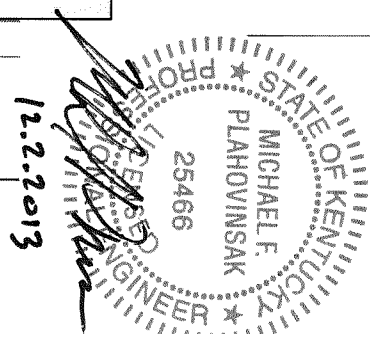
Section No.	Elevation	Size	Actual V_u	ϕV_u	Ratio	Actual T_u	ϕT_u	Ratio
			K	K	$\frac{V_u}{\phi V_u}$	kip-ft	kip-ft	$\frac{T_u}{\phi T_u}$
L1	195 - 149 (1)	TP30.7x20x0.1875	25.12	558.75	0.045	0.00	1360.59	0.000
L2	149 - 112.25 (2)	TP38.88x29.3364x0.3125	28.59	1307.53	0.022	0.00	4013.02	0.000
L3	112.25 - 77.75 (3)	TP46.28x36.9748x0.3125	31.84	1464.68	0.022	0.00	5366.70	0.000
L4	77.75 - 38.25 (4)	TP54.85x44.1429x0.375	35.48	2094.35	0.017	0.00	9101.42	0.000
L5	38.25 - 0 (5)	TP63x52.3543x0.375	38.76	2304.17	0.017	0.00	11905.67	0.000

Pole Interaction Design Data

Section No.	Elevation	Ratio P_u	Ratio M_{ux}	Ratio M_{uy}	Ratio V_u	Ratio T_u	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$\frac{P_u}{\phi P_u}$	$\frac{M_{ux}}{\phi M_{ux}}$	$\frac{M_{uy}}{\phi M_{uy}}$	$\frac{V_u}{\phi V_u}$	$\frac{T_u}{\phi T_u}$			
L1	195 - 149 (1)	0.009	0.802	0.000	0.045	0.000	0.813	1.000	4.8.2 ✓
L2	149 - 112.25 (2)	0.007	0.748	0.000	0.022	0.000	0.755	1.000	4.8.2 ✓
L3	112.25 - 77.75 (3)	0.009	0.937	0.000	0.022	0.000	0.947	1.000	4.8.2 ✓
L4	77.75 - 38.25 (4)	0.010	0.838	0.000	0.017	0.000	0.849	1.000	4.8.2 ✓
L5	38.25 - 0 (5)	0.013	0.928	0.000	0.017	0.000	0.941	1.000	4.8.2 ✓

Section Capacity Table

Section No.	Elevation	Component Type	Size	Critical Element	P	σP_{allow}	% Capacity	Pass/Fail	
L1	195 - 149	Pole	TP30.7x20x0.1875	1	-9.59	1117.50	81.3	Pass	
L2	149 - 112.25	Pole	TP38.88x29.3364x0.3125	2	-17.91	2615.06	75.5	Pass	
L3	112.25 - 77.75	Pole	TP46.28x36.9748x0.3125	3	-27.70	2929.35	94.7	Pass	
L4	77.75 - 38.25	Pole	TP54.85x44.1429x0.375	4	-41.85	4188.71	84.9	Pass	
L5	38.25 - 0	Pole	TP63x52.3543x0.375	5	-61.36	4608.35	94.1	Pass	
Summary									
Pole (L3)								94.7	Pass
RATING =								94.7	Pass





AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 195 ft Monopole
ATC Site Name : Center Point KY, KY
ATC Site Number : 281329
Engineering Number : 550565E2
Proposed Carrier : Operations Structural
Carrier Site Name : N/A
Carrier Site Number : N/A
Site Location : TBD
Tompkinsville, KY 42167-8675
36.728147,-85.570442
County : Monroe
Date : November 8, 2013
Max Usage : 96%
Result : Pass

Eric Bosko, E.I.





Table of Contents

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Supporting Documents	1
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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 195 ft monopole to reflect the current state of loading.

Supporting Documents

Tower Drawings	TransAmerican Job #23513-647, dated November 6, 2013
Geotechnical Report	FStan Project #13-8641, dated September 13, 2013

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	90 mph (3-Second Gust, Vasd) / 115 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	30 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2013 Kentucky Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact me via email at eric.bosko@americantower.com or call 919-466-5061.



Existing and Reserved Equipment

Mount Elev. ¹ (ft)	Qty.	Antenna	Mount Type	Lines	Carrier
No loading considered as existing.					

Proposed Equipment

Elevation ¹ (ft)		Qty.	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
190.0	190.0	1	105 Sq. Ft. w/ 10% increase for ice	T-Arm	(18) 1 5/8" Coax	Future Carriers
180.0	180.0	1	105 Sq. Ft. w/ 10% increase for ice	T-Arm	(18) 1 5/8" Coax	
170.0	170.0	1	105 Sq. Ft. w/ 10% increase for ice	T-Arm	(18) 1 5/8" Coax	
160.0	160.0	1	105 Sq. Ft. w/ 10% increase for ice	T-Arm	(18) 1 5/8" Coax	

¹Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax inside the pole shaft.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	96%	Pass
Shaft	96%	Pass
Base Plate	77%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Design
Moment (Kips-Ft)	5,578.6	74%
Shear (Kips)	39.0	72%

New foundations will be designed to support the proposed structure based on the site specific soil report.

Deflection and Sway*

Antenna Elevation (ft)	Deflection (ft)	Sway (Rotation) (°)
190.0	4.557	2.704

*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G



Standard Conditions

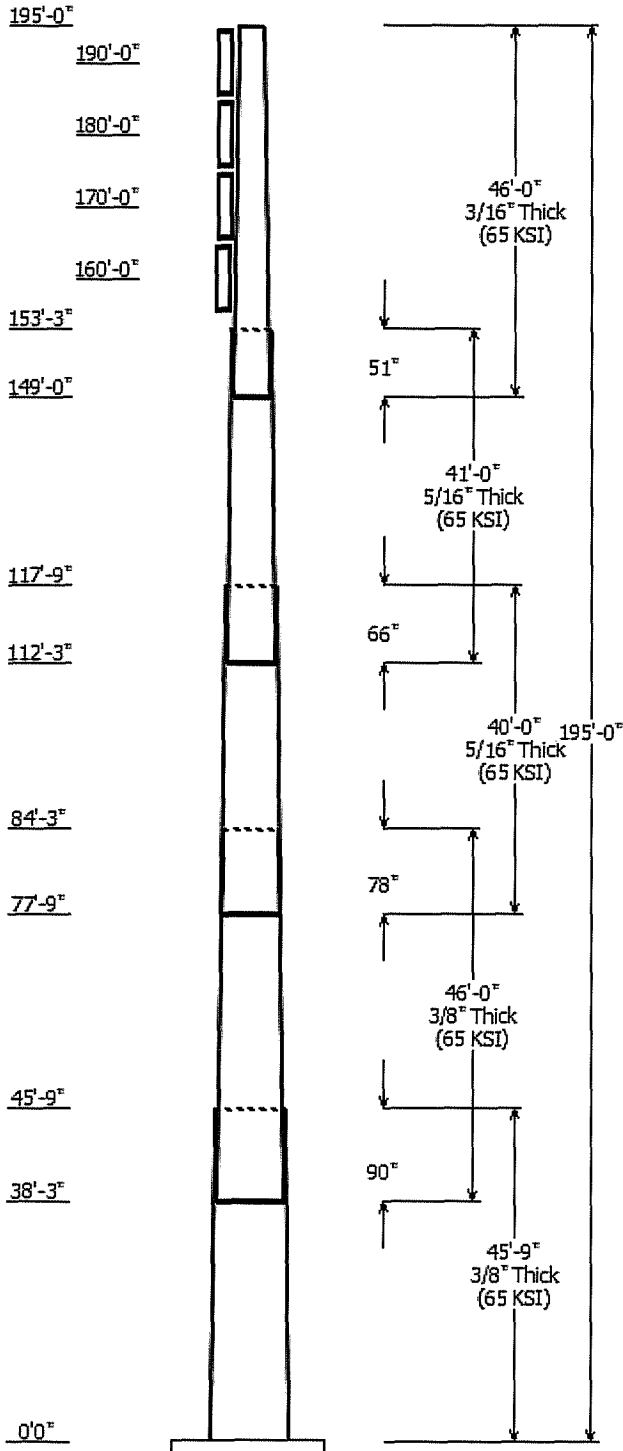
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information	
Pole : 281329	Code: ANSI/TIA-222 Rev G
Description : 195 ft TransAmerican Monopole	
Client : Operations Structural	Struct Class : II
Location : Center Point KY, KY	
Shape : 18 Sides	Exposure : C
Height : 195.00 (ft)	Topo : 1
Base Elev (ft): 0.00	
Taper: 0.23269(in/ft)	

Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
		Across Top	Flats Bottom					
1	45.750	52.35	63.00	0.375		0.000	0.232692	65
2	46.000	44.14	54.84	0.375	Slip Joint	90.000	0.232692	65
3	40.000	36.97	46.28	0.313	Slip Joint	78.000	0.232692	65
4	41.000	29.34	38.88	0.313	Slip Joint	66.000	0.232692	65
5	46.000	20.00	30.70	0.188	Slip Joint	51.000	0.232692	65

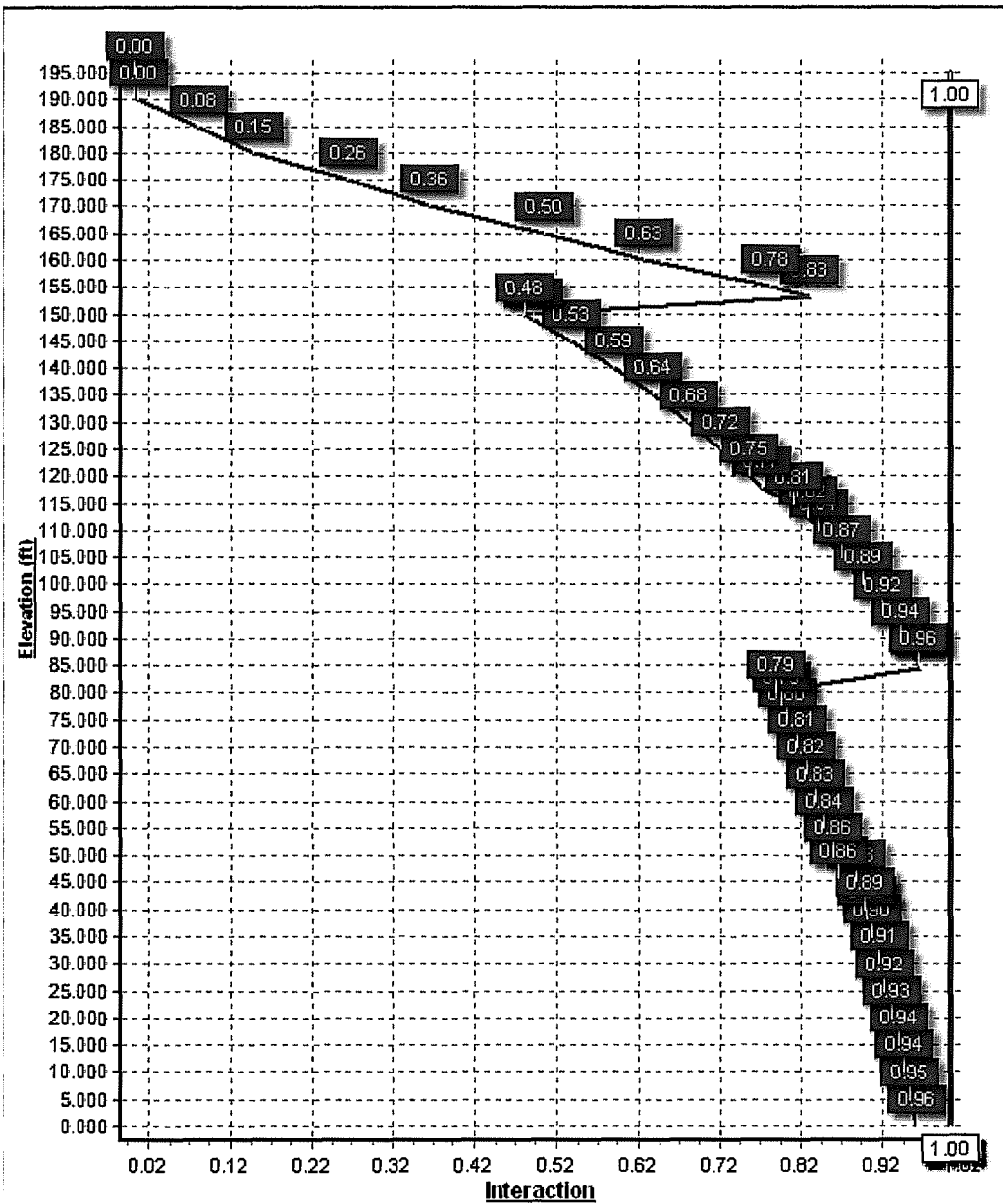
Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
190.000	190.000	1	105 Sq. Ft. w/ 10% increase fo
180.000	180.000	1	105 Sq. Ft. w/ 10% increase fo
170.000	170.000	1	105 Sq. Ft. w/ 10% increase fo
160.000	160.000	1	105 Sq. Ft. w/ 10% increase fo

Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
0.000	160.0	1 5/8" Coax	No
0.000	170.0	1 5/8" Coax	No
0.000	180.0	1 5/8" Coax	No
0.000	190.0	1 5/8" Coax	No

Load Cases	
1.2D + 1.6W	90.00 mph with No Ice
0.9D + 1.6W	90.00 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.75 in Radial Ice
1.0D + 1.0W	60.00 mph Serviceability

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	5578.65	38.96	59.81
0.9D + 1.6W	5497.50	38.93	44.84
1.2D + 1.0Di + 1.0Wi	729.46	4.99	84.02
1.0D + 1.0W	1540.01	10.82	49.89

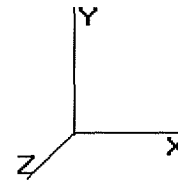
Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000



Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip		Weight (lb)	Bottom						Top							
				Joint Type	Joint Len (in)		Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	45.750	0.3750	65		0.00	10,617	63.00	0.00	74.54	36933.4	28.21	168.00	52.35	45.75	61.87	21118.7	23.21	139.61	0.232692	
2-18	46.000	0.3750	65	Slip	90.00	9,152	54.84	38.25	64.84	24308.4	24.38	146.27	44.14	84.25	52.10	12610.3	19.35	117.72	0.232692	
3-18	40.000	0.3125	65	Slip	78.00	5,578	46.28	77.75	45.60	12174.1	24.70	148.11	36.97	117.75	36.36	6175.6	19.45	118.32	0.232692	
4-18	41.000	0.3125	65	Slip	66.00	4,677	38.88	112.25	38.25	7189.0	20.53	124.42	29.34	153.25	28.79	3064.9	15.14	93.89	0.232692	
5-18	46.000	0.1875	65	Slip	51.00	2,344	30.70	149.00	18.16	2136.7	27.46	163.75	20.00	195.00	11.79	584.7	17.40	106.67	0.232692	
Shaft Weight						32,368														

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice CaAa (sf)	CaAa Factor	Weight (lb)	Ice CaAa (sf)	CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
190.00	105 Sq. Ft. w/ 10% increase fo	1	1800.00	105.00	1.00	4,373.22	180.052	1.00	0.000	0.000
180.00	105 Sq. Ft. w/ 10% increase fo	1	1800.00	105.00	1.00	4,359.35	179.648	1.00	0.000	0.000
170.00	105 Sq. Ft. w/ 10% increase fo	1	1800.00	105.00	1.00	4,344.76	179.222	1.00	0.000	0.000
160.00	105 Sq. Ft. w/ 10% increase fo	1	1800.00	105.00	1.00	4,329.38	178.774	1.00	0.000	0.000
Totals		4	7200.00			17,406.72			Number of Loadings :	4

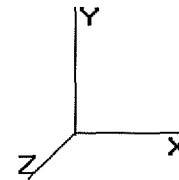
Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Exposed Width (in)	Exposed To Wind
0.00	190.00	(18) 1 5/8" Coax	0.00	N
0.00	180.00	(18) 1 5/8" Coax	0.00	N
0.00	170.00	(18) 1 5/8" Coax	0.00	N
0.00	160.00	(18) 1 5/8" Coax	0.00	N

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
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 Taper : 0.232692 (in/ft)

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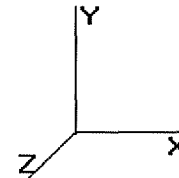
Segment Properties (Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	S (in3)	Weight (lb)
0.00		0.3750	63.000	74.537	36,933.4	28.21	168.00	68.2	1154.	0.0
5.00		0.3750	61.837	73.152	34,912.9	27.67	164.90	68.9	1112.	1,256.4
10.00		0.3750	60.673	71.767	32,967.5	27.12	161.79	69.5	1070.	1,232.8
15.00		0.3750	59.510	70.382	31,095.7	26.57	158.69	70.1	1029.	1,209.3
20.00		0.3750	58.346	68.998	29,296.2	26.02	155.59	70.8	989.0	1,185.7
25.00		0.3750	57.183	67.613	27,567.5	25.48	152.49	71.4	949.5	1,162.1
30.00		0.3750	56.019	66.228	25,908.1	24.93	149.38	72.1	910.9	1,138.6
35.00		0.3750	54.856	64.843	24,316.7	24.38	146.28	72.7	873.1	1,115.0
38.25	Bot - Section 2	0.3750	54.100	63.943	23,318.1	24.03	144.27	73.1	848.9	712.1
40.00		0.3750	53.692	63.459	22,791.9	23.84	143.18	73.4	836.1	764.0
45.00		0.3750	52.529	62.074	21,332.2	23.29	140.08	74.0	799.9	2,151.0
45.75	Top - Section 1	0.3750	53.104	62.759	22,046.1	23.56	141.61	73.7	817.7	318.6
50.00		0.3750	52.115	61.582	20,828.8	23.09	138.97	74.2	787.2	899.1
55.00		0.3750	50.952	60.197	19,455.1	22.55	135.87	74.9	752.1	1,036.0
60.00		0.3750	49.788	58.812	18,143.1	22.00	132.77	75.5	717.7	1,012.4
65.00		0.3750	48.625	57.427	16,891.5	21.45	129.67	76.2	684.2	988.8
70.00		0.3750	47.462	56.043	15,698.8	20.91	126.56	76.8	651.5	965.3
75.00		0.3750	46.298	54.658	14,563.6	20.36	123.46	77.5	619.6	941.7
77.75	Bot - Section 3	0.3750	45.658	53.896	13,963.2	20.06	121.76	77.8	602.4	507.9
80.00		0.3750	45.135	53.273	13,484.5	19.81	120.36	78.1	588.4	757.4
84.25	Top - Section 2	0.3125	44.771	44.095	11,011.6	23.85	143.27	73.3	484.4	1,406.7
85.00		0.3125	44.596	43.922	10,882.4	23.75	142.71	73.5	480.6	112.3
90.00		0.3125	43.433	42.768	10,047.0	23.10	138.98	74.2	455.6	737.5
95.00		0.3125	42.269	41.614	9,255.5	22.44	135.26	75.0	431.3	717.8
100.0		0.3125	41.106	40.460	8,506.7	21.78	131.54	75.8	407.6	698.2
105.0		0.3125	39.942	39.306	7,799.4	21.13	127.82	76.6	384.6	678.6
110.0		0.3125	38.779	38.152	7,132.4	20.47	124.09	77.3	362.3	658.9
112.2	Bot - Section 4	0.3125	38.255	37.633	6,845.1	20.17	122.42	77.7	352.4	290.1
115.0		0.3125	37.615	36.998	6,504.6	19.81	120.37	78.1	340.6	704.2
117.7	Top - Section 3	0.3125	37.600	36.984	6,496.8	19.81	120.32	78.1	340.3	692.3
120.0		0.3125	37.077	36.464	6,227.0	19.51	118.65	78.5	330.8	281.2
125.0		0.3125	35.913	35.310	5,654.3	18.85	114.92	79.2	310.1	610.6
130.0		0.3125	34.750	34.156	5,117.9	18.20	111.20	80.0	290.1	591.0
135.0		0.3125	33.587	33.002	4,616.5	17.54	107.48	80.8	270.7	571.3
140.0		0.3125	32.423	31.849	4,149.0	16.88	103.75	81.5	252.0	551.7
145.0		0.3125	31.260	30.695	3,714.1	16.23	100.03	82.3	234.0	532.1
149.0	Bot - Section 5	0.3125	30.329	29.771	3,389.0	15.70	97.05	82.6	220.1	411.5
150.0		0.3125	30.096	29.541	3,310.8	15.57	96.31	82.6	216.7	162.5
153.2	Top - Section 4	0.1875	29.715	17.572	1,935.6	26.53	158.48	70.2	128.3	519.4
155.0		0.1875	29.308	17.330	1,856.6	26.15	156.31	70.6	124.8	103.9
160.0		0.1875	28.144	16.637	1,642.9	25.06	150.10	71.9	115.0	289.0
165.0		0.1875	26.981	15.945	1,446.2	23.96	143.90	73.2	105.6	277.2
170.0		0.1875	25.817	15.252	1,265.8	22.87	137.69	74.5	96.6	265.4
175.0		0.1875	24.654	14.560	1,101.2	21.77	131.49	75.8	88.0	253.6
180.0		0.1875	23.490	13.868	951.4	20.68	125.28	77.1	79.8	241.8
185.0		0.1875	22.327	13.175	815.9	19.59	119.08	78.4	72.0	230.1
190.0		0.1875	21.163	12.483	693.9	18.49	112.87	79.7	64.6	218.3
195.0		0.1875	20.000	11.790	584.7	17.40	106.67	80.9	57.6	206.5
										32,367.6

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
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 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.6W	90.00 mph with No Ice	27 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.20		
Wind Load Factor : 1.60		

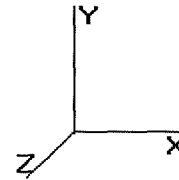
Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	16.744	18.41	442.34	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	16.744	18.41	434.17	0.650	0.000	5.00	26.409	17.17	505.9	0.0	1,507.7
10.00		1.00	0.85	16.744	18.41	426.00	0.650	0.000	5.00	25.917	16.85	496.4	0.0	1,479.4
15.00		1.00	0.85	16.744	18.41	417.83	0.650	0.000	5.00	25.424	16.53	487.0	0.0	1,451.1
20.00		1.00	0.90	17.766	19.54	421.98	0.650	0.000	5.00	24.932	16.21	506.7	0.0	1,422.8
25.00		1.00	0.94	18.621	20.48	423.40	0.650	0.000	5.00	24.440	15.89	520.6	0.0	1,394.6
30.00		1.00	0.98	19.350	21.28	422.82	0.650	0.000	5.00	23.948	15.57	530.1	0.0	1,366.3
35.00		1.00	1.01	19.988	21.98	420.81	0.650	0.000	5.00	23.455	15.25	536.3	0.0	1,338.0
38.25	Bot - Section 2	1.00	1.03	20.365	22.40	418.91	0.650	0.000	3.25	14.982	9.74	349.0	0.0	854.6
40.00		1.00	1.04	20.558	22.61	417.72	0.650	0.000	1.75	8.092	5.26	190.3	0.0	916.8
45.00		1.00	1.07	21.074	23.18	413.76	0.650	0.000	5.00	22.788	14.81	549.4	0.0	2,581.2
45.75	Top - Section 1	1.00	1.07	21.147	23.26	413.11	0.650	0.000	0.75	3.376	2.19	81.7	0.0	382.3
50.00		1.00	1.09	21.547	23.70	415.08	0.650	0.000	4.25	18.920	12.30	466.4	0.0	1,078.9
55.00		1.00	1.11	21.983	24.18	409.91	0.650	0.000	5.00	21.804	14.17	548.3	0.0	1,243.2
60.00		1.00	1.13	22.390	24.62	404.23	0.650	0.000	5.00	21.311	13.85	545.9	0.0	1,214.9
65.00		1.00	1.15	22.770	25.04	398.13	0.650	0.000	5.00	20.819	13.53	542.3	0.0	1,186.6
70.00		1.00	1.17	23.128	25.44	391.65	0.650	0.000	5.00	20.327	13.21	537.8	0.0	1,158.3
75.00		1.00	1.19	23.467	25.81	384.83	0.650	0.000	5.00	19.835	12.89	532.5	0.0	1,130.1
77.75	Bot - Section 3	1.00	1.20	23.645	26.01	380.95	0.650	0.000	2.75	10.699	6.95	289.4	0.0	609.5
80.00		1.00	1.20	23.788	26.16	377.72	0.650	0.000	2.25	8.762	5.70	238.4	0.0	908.8
84.25	Top - Section 2	1.00	1.22	24.048	26.45	371.46	0.650	0.000	4.25	16.279	10.58	447.8	0.0	1,688.0
85.00		1.00	1.22	24.093	26.50	375.60	0.650	0.000	0.75	2.836	1.84	78.2	0.0	134.8
90.00		1.00	1.23	24.385	26.82	368.01	0.650	0.000	5.00	18.622	12.10	519.5	0.0	885.0
95.00		1.00	1.25	24.664	27.13	360.19	0.650	0.000	5.00	18.130	11.78	511.5	0.0	861.4
100.00		1.00	1.26	24.932	27.42	352.18	0.650	0.000	5.00	17.638	11.46	503.1	0.0	837.8
105.00		1.00	1.27	25.189	27.70	343.97	0.650	0.000	5.00	17.145	11.14	494.1	0.0	814.3
110.00		1.00	1.29	25.437	27.98	335.59	0.650	0.000	5.00	16.653	10.82	484.6	0.0	790.7
112.2	Bot - Section 4	1.00	1.29	25.546	28.10	331.76	0.650	0.000	2.25	7.333	4.77	214.3	0.0	348.1
115.00		1.00	1.30	25.676	28.24	327.05	0.650	0.000	2.75	8.973	5.83	263.6	0.0	845.0
117.7	Top - Section 3	1.00	1.31	25.804	28.38	322.28	0.650	0.000	2.75	8.824	5.74	260.5	0.0	830.8
120.00		1.00	1.31	25.907	28.49	323.81	0.650	0.000	2.25	7.109	4.62	210.7	0.0	337.4
125.00		1.00	1.32	26.131	28.74	315.00	0.650	0.000	5.00	15.441	10.04	461.6	0.0	732.7
130.00		1.00	1.33	26.348	28.98	306.06	0.650	0.000	5.00	14.949	9.72	450.6	0.0	709.1
135.00		1.00	1.34	26.558	29.21	296.99	0.650	0.000	5.00	14.456	9.40	439.2	0.0	685.6
140.00		1.00	1.35	26.762	29.43	287.80	0.650	0.000	5.00	13.964	9.08	427.5	0.0	662.0
145.00		1.00	1.36	26.960	29.65	278.50	0.650	0.000	5.00	13.472	8.76	415.5	0.0	638.5
149.0	Bot - Section 5	1.00	1.37	27.115	29.82	270.98	0.650	0.000	4.00	10.423	6.78	323.3	0.0	493.8
150.00		1.00	1.37	27.153	29.86	269.09	0.650	0.000	1.00	2.588	1.68	80.4	0.0	195.0
153.2	Top - Section 4	1.00	1.38	27.276	30.00	262.92	0.650	0.000	3.25	8.276	5.38	258.2	0.0	623.2
155.00		1.00	1.38	27.341	30.07	262.95	0.650	0.000	1.75	4.370	2.84	136.7	0.0	124.7
160.00	Appertunance(s)	1.00	1.39	27.525	30.27	253.35	0.650	0.000	5.00	12.154	7.90	382.7	0.0	346.7
165.00		1.00	1.40	27.704	30.47	243.67	0.650	0.000	5.00	11.662	7.58	369.6	0.0	332.6
170.00	Appertunance(s)	1.00	1.41	27.878	30.66	233.90	0.650	0.000	5.00	11.169	7.26	356.2	0.0	318.5
175.00		1.00	1.42	28.049	30.85	224.04	0.650	0.000	5.00	10.677	6.94	342.6	0.0	304.3
180.00	Appertunance(s)	1.00	1.43	28.216	31.03	214.10	0.650	0.000	5.00	10.185	6.62	328.8	0.0	290.2
185.00		1.00	1.44	28.379	31.21	204.08	0.650	0.000	5.00	9.693	6.30	314.7	0.0	276.1
190.00	Appertunance(s)	1.00	1.44	28.539	31.39	193.99	0.650	0.000	5.00	9.200	5.98	300.4	0.0	261.9
195.00		1.00	1.45	28.695	31.56	183.83	0.650	0.000	5.00	8.708	5.66	285.9	0.0	247.8
Totals:									195.00			18,116.3	0.0	38,841.1

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.6W	90.00 mph with No Ice	27 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.20		
Wind Load Factor : 1.60		

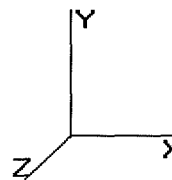
Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
160.0	105 Sq. Ft. w/ 10% i	1	27.525	30.277	1.00	1.00	105.00	0.000	0.000	5,086.58	0.00	0.00	2,160.00
170.0	105 Sq. Ft. w/ 10% i	1	27.878	30.666	1.00	1.00	105.00	0.000	0.000	5,151.92	0.00	0.00	2,160.00
180.0	105 Sq. Ft. w/ 10% i	1	28.216	31.037	1.00	1.00	105.00	0.000	0.000	5,214.29	0.00	0.00	2,160.00
190.0	105 Sq. Ft. w/ 10% i	1	28.539	31.393	1.00	1.00	105.00	0.000	0.000	5,273.98	0.00	0.00	2,160.00
										20,726.77			8,640.00

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.6W	90.00 mph with No Ice	27 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.20		
Wind Load Factor : 1.60		

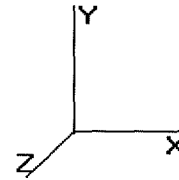
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	505.87	1,861.90	0.00	0.00
10.00	496.44	1,833.62	0.00	0.00
15.00	487.02	1,805.35	0.00	0.00
20.00	506.74	1,777.08	0.00	0.00
25.00	520.63	1,748.81	0.00	0.00
30.00	530.10	1,720.53	0.00	0.00
35.00	536.33	1,692.26	0.00	0.00
38.25	349.04	1,084.81	0.00	0.00
40.00	190.31	1,040.76	0.00	0.00
45.00	549.39	2,935.42	0.00	0.00
45.75	81.67	435.44	0.00	0.00
50.00	466.37	1,380.02	0.00	0.00
55.00	548.33	1,597.40	0.00	0.00
60.00	545.86	1,569.13	0.00	0.00
65.00	542.32	1,540.85	0.00	0.00
70.00	537.82	1,512.58	0.00	0.00
75.00	532.47	1,484.31	0.00	0.00
77.75	289.41	804.32	0.00	0.00
80.00	238.44	1,068.24	0.00	0.00
84.25	447.85	1,989.15	0.00	0.00
85.00	78.16	187.91	0.00	0.00
90.00	519.49	1,239.21	0.00	0.00
95.00	511.55	1,215.65	0.00	0.00
100.0	503.06	1,192.09	0.00	0.00
105.0	494.07	1,168.53	0.00	0.00
110.0	484.61	1,144.97	0.00	0.00
112.2	214.31	507.55	0.00	0.00
115.0	263.57	1,039.84	0.00	0.00
117.7	260.49	1,025.59	0.00	0.00
120.0	210.70	496.81	0.00	0.00
125.0	461.59	1,086.94	0.00	0.00
130.0	450.58	1,063.38	0.00	0.00
135.0	439.21	1,039.82	0.00	0.00
140.0	427.52	1,016.26	0.00	0.00
145.0	415.51	992.70	0.00	0.00
149.0	323.32	777.20	0.00	0.00
150.0	80.40	265.82	0.00	0.00
153.2	258.24	853.49	0.00	0.00
155.0	136.69	248.68	0.00	0.00
160.0	5,469.29	2,860.98	0.00	0.00
165.0	369.59	598.29	0.00	0.00
170.0	5,508.14	2,744.15	0.00	0.00
175.0	342.61	481.45	0.00	0.00
180.0	5,543.04	2,627.32	0.00	0.00
185.0	314.67	364.62	0.00	0.00
190.0	5,574.35	2,510.49	0.00	0.00
195.0	285.86	247.79	0.00	0.00
Totals:	38,843.03	59,879.50	0.00	0.00

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
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 Topographic Category : 1
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Load Case: 1.2D + 1.6W	90.00 mph with No Ice	27 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.20		
Wind Load Factor : 1.60		

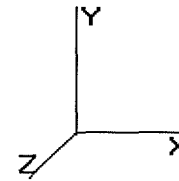
Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-59.81	-38.96	0.00	-5,578.65	0.00	5,578.65	4,576.28	2,288.14	11,797.9	5,907.74	0.00	0.00	0.958
5.00	-57.80	-38.66	0.00	-5,383.88	0.00	5,383.88	4,533.62	2,266.81	11,469.5	5,743.29	0.11	-0.21	0.950
10.00	-55.83	-38.37	0.00	-5,190.58	0.00	5,190.58	4,489.36	2,244.68	11,141.2	5,578.90	0.45	-0.43	0.943
15.00	-53.88	-38.07	0.00	-4,998.75	0.00	4,998.75	4,443.50	2,221.75	10,813.3	5,414.70	1.01	-0.65	0.936
20.00	-51.96	-37.75	0.00	-4,808.39	0.00	4,808.39	4,396.03	2,198.01	10,486.0	5,250.80	1.81	-0.87	0.928
25.00	-50.07	-37.40	0.00	-4,619.66	0.00	4,619.66	4,346.96	2,173.48	10,159.5	5,087.31	2.85	-1.10	0.920
30.00	-48.21	-37.03	0.00	-4,432.66	0.00	4,432.66	4,296.28	2,148.14	9,834.08	4,924.35	4.12	-1.33	0.912
35.00	-46.40	-36.61	0.00	-4,247.51	0.00	4,247.51	4,244.00	2,122.00	9,509.93	4,762.03	5.65	-1.57	0.903
38.25	-45.25	-36.33	0.00	-4,128.52	0.00	4,128.52	4,209.15	2,104.58	9,300.04	4,656.93	6.77	-1.73	0.898
40.00	-44.11	-36.24	0.00	-4,064.94	0.00	4,064.94	4,190.11	2,095.06	9,187.31	4,600.48	7.42	-1.82	0.894
45.00	-41.11	-35.69	0.00	-3,883.76	0.00	3,883.76	4,134.63	2,067.31	8,866.44	4,439.81	9.46	-2.07	0.885
45.75	-40.59	-35.69	0.00	-3,856.99	0.00	3,856.99	4,162.27	2,081.14	9,024.92	4,519.17	9.79	-2.10	0.864
50.00	-39.09	-35.32	0.00	-3,705.33	0.00	3,705.33	4,114.52	2,057.26	8,752.88	4,382.94	11.76	-2.32	0.855
55.00	-37.37	-34.87	0.00	-3,528.71	0.00	3,528.71	4,056.86	2,028.43	8,434.75	4,223.64	14.32	-2.57	0.845
60.00	-35.67	-34.41	0.00	-3,354.36	0.00	3,354.36	3,997.59	1,998.80	8,118.92	4,065.50	17.15	-2.82	0.834
65.00	-34.01	-33.94	0.00	-3,182.31	0.00	3,182.31	3,936.72	1,968.36	7,805.63	3,908.62	20.24	-3.08	0.823
70.00	-32.38	-33.47	0.00	-3,012.60	0.00	3,012.60	3,874.25	1,937.12	7,495.10	3,753.12	23.60	-3.34	0.811
75.00	-30.81	-32.96	0.00	-2,845.25	0.00	2,845.25	3,810.17	1,905.09	7,187.57	3,599.12	27.23	-3.60	0.799
77.75	-29.94	-32.69	0.00	-2,754.61	0.00	2,754.61	3,774.25	1,887.12	7,019.78	3,515.11	29.35	-3.75	0.792
80.00	-28.79	-32.47	0.00	-2,681.05	0.00	2,681.05	3,744.49	1,872.25	6,883.26	3,446.74	31.15	-3.88	0.786
84.25	-26.76	-31.95	0.00	-2,543.04	0.00	2,543.04	2,910.86	1,455.43	5,321.93	2,664.92	34.70	-4.11	0.964
85.00	-26.48	-31.95	0.00	-2,519.07	0.00	2,519.07	2,904.01	1,452.01	5,288.42	2,648.14	35.35	-4.15	0.961
90.00	-25.11	-31.48	0.00	-2,359.34	0.00	2,359.34	2,857.44	1,428.72	5,065.93	2,536.73	39.87	-4.47	0.939
95.00	-23.76	-31.00	0.00	-2,201.97	0.00	2,201.97	2,809.25	1,404.63	4,845.16	2,426.18	44.72	-4.80	0.917
100.00	-22.44	-30.53	0.00	-2,046.95	0.00	2,046.95	2,759.47	1,379.74	4,626.35	2,316.61	49.92	-5.12	0.892
105.00	-21.15	-30.05	0.00	-1,894.32	0.00	1,894.32	2,708.08	1,354.04	4,409.72	2,208.14	55.45	-5.45	0.866
110.00	-19.94	-29.54	0.00	-1,744.06	0.00	1,744.06	2,655.09	1,327.54	4,195.51	2,100.87	61.33	-5.78	0.838
112.25	-19.36	-29.33	0.00	-1,677.60	0.00	1,677.60	2,630.72	1,315.36	4,099.96	2,053.03	64.09	-5.94	0.825
115.00	-18.26	-29.02	0.00	-1,596.93	0.00	1,596.93	2,600.49	1,300.25	3,983.95	1,994.93	67.56	-6.12	0.808
117.75	-17.19	-28.70	0.00	-1,517.13	0.00	1,517.13	2,599.78	1,299.89	3,981.25	1,993.59	71.14	-6.31	0.768
120.00	-16.60	-28.51	0.00	-1,452.55	0.00	1,452.55	2,574.68	1,287.34	3,886.99	1,946.39	74.14	-6.47	0.753
125.00	-15.42	-28.01	0.00	-1,310.01	0.00	1,310.01	2,517.74	1,258.87	3,679.73	1,842.60	81.07	-6.78	0.718
130.00	-14.27	-27.51	0.00	-1,169.97	0.00	1,169.97	2,459.20	1,229.60	3,475.68	1,740.42	88.32	-7.09	0.679
135.00	-13.15	-27.01	0.00	-1,032.43	0.00	1,032.43	2,399.05	1,199.52	3,275.08	1,639.98	95.90	-7.40	0.636
140.00	-12.07	-26.52	0.00	-897.37	0.00	897.37	2,337.29	1,168.65	3,078.17	1,541.38	103.79	-7.70	0.588
145.00	-11.03	-26.02	0.00	-764.79	0.00	764.79	2,273.93	1,136.97	2,885.18	1,444.73	111.98	-7.98	0.535
149.00	-10.24	-25.61	0.00	-660.72	0.00	660.72	2,211.87	1,105.93	2,721.18	1,362.61	118.74	-8.20	0.490
150.00	-9.94	-25.51	0.00	-635.10	0.00	635.10	2,194.72	1,097.36	2,678.93	1,341.46	120.46	-8.25	0.479
153.25	-9.08	-25.15	0.00	-552.18	0.00	552.18	1,110.07	555.04	1,348.86	675.43	126.12	-8.42	0.828
155.00	-8.76	-25.02	0.00	-508.16	0.00	508.16	1,101.79	550.89	1,320.21	661.09	129.21	-8.51	0.779
160.00	-6.65	-19.22	0.00	-383.08	0.00	383.08	1,077.04	538.52	1,238.66	620.25	138.27	-8.85	0.625
165.00	-6.03	-18.78	0.00	-287.00	0.00	287.00	1,050.68	525.34	1,157.73	579.72	147.66	-9.14	0.502
170.00	-4.16	-12.92	0.00	-193.08	0.00	193.08	1,022.72	511.36	1,077.64	539.62	157.33	-9.37	0.363
175.00	-3.71	-12.51	0.00	-128.47	0.00	128.47	993.16	496.58	998.64	500.06	167.20	-9.55	0.261
180.00	-2.04	-6.61	0.00	-65.90	0.00	65.90	961.99	481.00	920.96	461.16	177.24	-9.68	0.145
185.00	-1.72	-6.24	0.00	-32.84	0.00	32.84	929.22	464.61	844.81	423.03	187.37	-9.75	0.080
190.00	-0.20	-0.32	0.00	-1.62	0.00	1.62	894.85	447.42	770.45	385.80	197.56	-9.78	0.004
195.00	0.00	-0.29	0.00	0.00	0.00	0.00	858.87	429.43	698.09	349.57	207.76	-9.79	0.000

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.6W	90.00 mph with No Ice (Reduced DL)	27 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 0.90		
Wind Load Factor : 1.60		

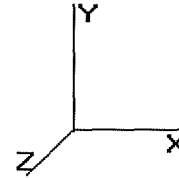
Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	16.744	18.41	442.34	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	16.744	18.41	434.17	0.650	0.000	5.00	26.409	17.17	505.9	0.0	1,130.7
10.00		1.00	0.85	16.744	18.41	426.00	0.650	0.000	5.00	25.917	16.85	496.4	0.0	1,109.5
15.00		1.00	0.85	16.744	18.41	417.83	0.650	0.000	5.00	25.424	16.53	487.0	0.0	1,088.3
20.00		1.00	0.90	17.766	19.54	421.98	0.650	0.000	5.00	24.932	16.21	506.7	0.0	1,067.1
25.00		1.00	0.94	18.621	20.48	423.40	0.650	0.000	5.00	24.440	15.89	520.6	0.0	1,045.9
30.00		1.00	0.98	19.350	21.28	422.82	0.650	0.000	5.00	23.948	15.57	530.1	0.0	1,024.7
35.00		1.00	1.01	19.988	21.98	420.81	0.650	0.000	5.00	23.455	15.25	536.3	0.0	1,003.5
38.25	Bot - Section 2	1.00	1.03	20.365	22.40	418.91	0.650	0.000	3.25	14.982	9.74	349.0	0.0	640.9
40.00		1.00	1.04	20.558	22.61	417.72	0.650	0.000	1.75	8.092	5.26	190.3	0.0	687.6
45.00		1.00	1.07	21.074	23.18	413.76	0.650	0.000	5.00	22.788	14.81	549.4	0.0	1,935.9
45.75	Top - Section 1	1.00	1.07	21.147	23.26	413.11	0.650	0.000	0.75	3.376	2.19	81.7	0.0	286.7
50.00		1.00	1.09	21.547	23.70	415.08	0.650	0.000	4.25	18.920	12.30	466.4	0.0	809.2
55.00		1.00	1.11	21.983	24.18	409.91	0.650	0.000	5.00	21.804	14.17	548.3	0.0	932.4
60.00		1.00	1.13	22.390	24.62	404.23	0.650	0.000	5.00	21.311	13.85	545.9	0.0	911.2
65.00		1.00	1.15	22.770	25.04	398.13	0.650	0.000	5.00	20.819	13.53	542.3	0.0	890.0
70.00		1.00	1.17	23.128	25.44	391.65	0.650	0.000	5.00	20.327	13.21	537.8	0.0	868.8
75.00		1.00	1.19	23.467	25.81	384.83	0.650	0.000	5.00	19.835	12.89	532.5	0.0	847.6
77.75	Bot - Section 3	1.00	1.20	23.645	26.01	380.95	0.650	0.000	2.75	10.699	6.95	289.4	0.0	457.1
80.00		1.00	1.20	23.788	26.16	377.72	0.650	0.000	2.25	8.762	5.70	238.4	0.0	681.6
84.25	Top - Section 2	1.00	1.22	24.048	26.45	371.46	0.650	0.000	4.25	16.279	10.58	447.8	0.0	1,266.0
85.00		1.00	1.22	24.093	26.50	375.60	0.650	0.000	0.75	2.836	1.84	78.2	0.0	101.1
90.00		1.00	1.23	24.385	26.82	368.01	0.650	0.000	5.00	18.622	12.10	519.5	0.0	663.7
95.00		1.00	1.25	24.664	27.13	360.19	0.650	0.000	5.00	18.130	11.78	511.5	0.0	646.1
100.00		1.00	1.26	24.932	27.42	352.18	0.650	0.000	5.00	17.638	11.46	503.1	0.0	628.4
105.00		1.00	1.27	25.189	27.70	343.97	0.650	0.000	5.00	17.145	11.14	494.1	0.0	610.7
110.00		1.00	1.29	25.437	27.98	335.59	0.650	0.000	5.00	16.653	10.82	484.6	0.0	593.0
112.25	Bot - Section 4	1.00	1.29	25.546	28.10	331.76	0.650	0.000	2.25	7.333	4.77	214.3	0.0	261.1
115.00		1.00	1.30	25.676	28.24	327.05	0.650	0.000	2.75	8.973	5.83	263.6	0.0	633.8
117.75	Top - Section 3	1.00	1.31	25.804	28.38	322.28	0.650	0.000	2.75	8.824	5.74	260.5	0.0	623.1
120.00		1.00	1.31	25.907	28.49	323.81	0.650	0.000	2.25	7.109	4.62	210.7	0.0	253.1
125.00		1.00	1.32	26.131	28.74	315.00	0.650	0.000	5.00	15.441	10.04	461.6	0.0	549.5
130.00		1.00	1.33	26.348	28.98	306.06	0.650	0.000	5.00	14.949	9.72	450.6	0.0	531.9
135.00		1.00	1.34	26.558	29.21	296.99	0.650	0.000	5.00	14.456	9.40	439.2	0.0	514.2
140.00		1.00	1.35	26.762	29.43	287.80	0.650	0.000	5.00	13.964	9.08	427.5	0.0	496.5
145.00		1.00	1.36	26.960	29.65	278.50	0.650	0.000	5.00	13.472	8.76	415.5	0.0	478.8
149.00	Bot - Section 5	1.00	1.37	27.115	29.82	270.98	0.650	0.000	4.00	10.423	6.78	323.3	0.0	370.4
150.00		1.00	1.37	27.153	29.86	269.09	0.650	0.000	1.00	2.588	1.68	80.4	0.0	146.2
153.25	Top - Section 4	1.00	1.38	27.276	30.00	262.92	0.650	0.000	3.25	8.276	5.38	258.2	0.0	467.4
155.00		1.00	1.38	27.341	30.07	262.95	0.650	0.000	1.75	4.370	2.84	136.7	0.0	93.5
160.00	Appertunance(s)	1.00	1.39	27.525	30.27	253.35	0.650	0.000	5.00	12.154	7.90	382.7	0.0	260.1
165.00		1.00	1.40	27.704	30.47	243.67	0.650	0.000	5.00	11.662	7.58	369.6	0.0	249.5
170.00	Appertunance(s)	1.00	1.41	27.878	30.66	233.90	0.650	0.000	5.00	11.169	7.26	356.2	0.0	238.9
175.00		1.00	1.42	28.049	30.85	224.04	0.650	0.000	5.00	10.677	6.94	342.6	0.0	228.3
180.00	Appertunance(s)	1.00	1.43	28.216	31.03	214.10	0.650	0.000	5.00	10.185	6.62	328.8	0.0	217.6
185.00		1.00	1.44	28.379	31.21	204.08	0.650	0.000	5.00	9.693	6.30	314.7	0.0	207.0
190.00	Appertunance(s)	1.00	1.44	28.539	31.39	193.99	0.650	0.000	5.00	9.200	5.98	300.4	0.0	196.4
195.00		1.00	1.45	28.695	31.56	183.83	0.650	0.000	5.00	8.708	5.66	285.9	0.0	185.8
Totals:									195.00			18,116.3	0.0	29,130.8

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.6W	90.00 mph with No Ice (Reduced DL)	27 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 0.90		
Wind Load Factor : 1.60		

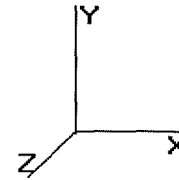
Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
160.0	105 Sq. Ft. w/ 10% i	1	27.525	30.277	1.00	1.00	105.00	0.000	0.000	5,086.58	0.00	0.00	1,620.00
170.0	105 Sq. Ft. w/ 10% i	1	27.878	30.666	1.00	1.00	105.00	0.000	0.000	5,151.92	0.00	0.00	1,620.00
180.0	105 Sq. Ft. w/ 10% i	1	28.216	31.037	1.00	1.00	105.00	0.000	0.000	5,214.29	0.00	0.00	1,620.00
190.0	105 Sq. Ft. w/ 10% i	1	28.539	31.393	1.00	1.00	105.00	0.000	0.000	5,273.98	0.00	0.00	1,620.00
										20,726.77			6,480.00

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.6W	90.00 mph with No Ice (Reduced DL)	27 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 0.90		
Wind Load Factor : 1.60		

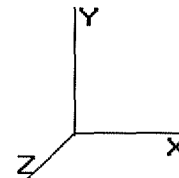
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	505.87	1,396.42	0.00	0.00
10.00	496.44	1,375.22	0.00	0.00
15.00	487.02	1,354.01	0.00	0.00
20.00	506.74	1,332.81	0.00	0.00
25.00	520.63	1,311.61	0.00	0.00
30.00	530.10	1,290.40	0.00	0.00
35.00	536.33	1,269.20	0.00	0.00
38.25	349.04	813.61	0.00	0.00
40.00	190.31	780.57	0.00	0.00
45.00	549.39	2,201.57	0.00	0.00
45.75	81.67	326.58	0.00	0.00
50.00	466.37	1,035.01	0.00	0.00
55.00	548.33	1,198.05	0.00	0.00
60.00	545.86	1,176.84	0.00	0.00
65.00	542.32	1,155.64	0.00	0.00
70.00	537.82	1,134.44	0.00	0.00
75.00	532.47	1,113.23	0.00	0.00
77.75	289.41	603.24	0.00	0.00
80.00	238.44	801.18	0.00	0.00
84.25	447.85	1,491.86	0.00	0.00
85.00	78.16	140.93	0.00	0.00
90.00	519.49	929.40	0.00	0.00
95.00	511.55	911.73	0.00	0.00
100.0	503.06	894.06	0.00	0.00
105.0	494.07	876.39	0.00	0.00
110.0	484.61	858.72	0.00	0.00
112.2	214.31	380.66	0.00	0.00
115.0	263.57	779.88	0.00	0.00
117.7	260.49	769.19	0.00	0.00
120.0	210.70	372.61	0.00	0.00
125.0	461.59	815.21	0.00	0.00
130.0	450.58	797.54	0.00	0.00
135.0	439.21	779.87	0.00	0.00
140.0	427.52	762.20	0.00	0.00
145.0	415.51	744.53	0.00	0.00
149.0	323.32	582.90	0.00	0.00
150.0	80.40	199.36	0.00	0.00
153.2	258.24	640.12	0.00	0.00
155.0	136.69	186.51	0.00	0.00
160.0	5,469.29	2,145.74	0.00	0.00
165.0	369.59	448.72	0.00	0.00
170.0	5,508.14	2,058.11	0.00	0.00
175.0	342.61	361.09	0.00	0.00
180.0	5,543.04	1,970.49	0.00	0.00
185.0	314.67	273.47	0.00	0.00
190.0	5,574.35	1,882.87	0.00	0.00
195.0	285.86	185.84	0.00	0.00
Totals:	38,843.03	44,909.62	0.00	0.00

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
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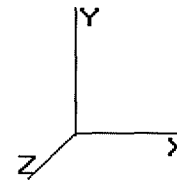
Load Case: 0.9D + 1.6W	90.00 mph with No Ice (Reduced DL)	27 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 0.90		
Wind Load Factor : 1.60		

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.84	-38.93	0.00	-5,497.50	0.00	5,497.50	4,576.28	2,288.14	11,797.9	5,907.74	0.00	0.00	0.941
5.00	-43.30	-38.58	0.00	-5,302.87	0.00	5,302.87	4,533.62	2,266.81	11,469.5	5,743.29	0.11	-0.21	0.933
10.00	-41.79	-38.23	0.00	-5,110.00	0.00	5,110.00	4,489.36	2,244.68	11,141.2	5,578.90	0.44	-0.42	0.926
15.00	-40.29	-37.88	0.00	-4,918.85	0.00	4,918.85	4,443.50	2,221.75	10,813.3	5,414.70	1.00	-0.64	0.918
20.00	-38.82	-37.51	0.00	-4,729.44	0.00	4,729.44	4,396.03	2,198.01	10,486.0	5,250.80	1.78	-0.86	0.910
25.00	-37.37	-37.12	0.00	-4,541.89	0.00	4,541.89	4,346.96	2,173.48	10,159.5	5,087.31	2.80	-1.08	0.902
30.00	-35.94	-36.71	0.00	-4,356.31	0.00	4,356.31	4,296.28	2,148.14	9,834.08	4,924.35	4.06	-1.31	0.893
35.00	-34.56	-36.26	0.00	-4,172.79	0.00	4,172.79	4,244.00	2,122.00	9,509.93	4,762.03	5.56	-1.55	0.885
38.25	-33.69	-35.95	0.00	-4,054.97	0.00	4,054.97	4,209.15	2,104.58	9,300.04	4,656.93	6.67	-1.70	0.879
40.00	-32.81	-35.84	0.00	-3,992.05	0.00	3,992.05	4,190.11	2,095.06	9,187.31	4,600.48	7.31	-1.79	0.876
45.00	-30.54	-35.29	0.00	-3,812.87	0.00	3,812.87	4,134.63	2,067.31	8,866.44	4,439.81	9.31	-2.03	0.866
45.75	-30.14	-35.26	0.00	-3,786.41	0.00	3,786.41	4,162.27	2,081.14	9,024.92	4,519.17	9.63	-2.07	0.845
50.00	-28.98	-34.87	0.00	-3,636.56	0.00	3,636.56	4,114.52	2,057.26	8,752.88	4,382.94	11.57	-2.28	0.837
55.00	-27.66	-34.39	0.00	-3,462.21	0.00	3,462.21	4,056.86	2,028.43	8,434.75	4,223.64	14.09	-2.52	0.827
60.00	-26.37	-33.91	0.00	-3,290.26	0.00	3,290.26	3,997.59	1,998.80	8,118.92	4,065.50	16.87	-2.77	0.816
65.00	-25.09	-33.42	0.00	-3,120.73	0.00	3,120.73	3,936.72	1,968.36	7,805.63	3,908.62	19.90	-3.02	0.805
70.00	-23.84	-32.93	0.00	-2,953.65	0.00	2,953.65	3,874.25	1,937.12	7,495.10	3,753.12	23.20	-3.28	0.793
75.00	-22.65	-32.41	0.00	-2,789.02	0.00	2,789.02	3,810.17	1,905.09	7,187.57	3,599.12	26.78	-3.54	0.781
77.75	-21.99	-32.13	0.00	-2,699.90	0.00	2,699.90	3,774.25	1,887.12	7,019.78	3,515.11	28.86	-3.69	0.774
80.00	-21.10	-31.91	0.00	-2,627.60	0.00	2,627.60	3,744.49	1,872.25	6,883.26	3,446.74	30.62	-3.81	0.768
84.25	-19.57	-31.41	0.00	-2,491.99	0.00	2,491.99	2,910.86	1,455.43	5,321.93	2,664.92	34.12	-4.04	0.942
85.00	-19.34	-31.38	0.00	-2,468.44	0.00	2,468.44	2,904.01	1,452.01	5,288.42	2,648.14	34.75	-4.08	0.939
90.00	-18.28	-30.89	0.00	-2,311.55	0.00	2,311.55	2,857.44	1,428.72	5,065.93	2,536.73	39.19	-4.39	0.918
95.00	-17.25	-30.41	0.00	-2,157.10	0.00	2,157.10	2,809.25	1,404.63	4,845.16	2,426.18	43.95	-4.71	0.896
100.00	-16.23	-29.92	0.00	-2,005.07	0.00	2,005.07	2,759.47	1,379.74	4,626.35	2,316.61	49.05	-5.03	0.872
105.00	-15.24	-29.44	0.00	-1,855.47	0.00	1,855.47	2,708.08	1,354.04	4,409.72	2,208.14	54.48	-5.35	0.846
110.00	-14.31	-28.93	0.00	-1,708.30	0.00	1,708.30	2,655.09	1,327.54	4,195.51	2,100.87	60.26	-5.68	0.819
112.25	-13.87	-28.72	0.00	-1,643.21	0.00	1,643.21	2,630.72	1,315.36	4,099.96	2,053.03	62.96	-5.83	0.806
115.00	-13.03	-28.42	0.00	-1,564.23	0.00	1,564.23	2,600.49	1,300.25	3,983.95	1,994.93	66.37	-6.01	0.790
117.75	-12.21	-28.11	0.00	-1,486.08	0.00	1,486.08	2,599.78	1,299.89	3,981.25	1,993.59	69.88	-6.19	0.751
120.00	-11.75	-27.91	0.00	-1,422.83	0.00	1,422.83	2,574.68	1,287.34	3,886.99	1,946.39	72.83	-6.34	0.736
125.00	-10.84	-27.42	0.00	-1,283.28	0.00	1,283.28	2,517.74	1,258.87	3,679.73	1,842.60	79.62	-6.65	0.701
130.00	-9.96	-26.93	0.00	-1,146.19	0.00	1,146.19	2,459.20	1,229.60	3,475.68	1,740.42	86.74	-6.96	0.663
135.00	-9.11	-26.44	0.00	-1,011.54	0.00	1,011.54	2,399.05	1,199.52	3,275.08	1,639.98	94.17	-7.26	0.621
140.00	-8.28	-25.96	0.00	-879.32	0.00	879.32	2,337.29	1,168.65	3,078.17	1,541.38	101.91	-7.55	0.575
145.00	-7.49	-25.48	0.00	-749.50	0.00	749.50	2,273.93	1,136.97	2,885.18	1,444.73	109.95	-7.83	0.523
149.00	-6.90	-25.10	0.00	-647.57	0.00	647.57	2,211.87	1,105.93	2,721.18	1,362.61	116.58	-8.04	0.479
150.00	-6.66	-25.00	0.00	-622.47	0.00	622.47	2,194.72	1,097.36	2,678.93	1,341.46	118.27	-8.10	0.468
153.25	-6.01	-24.67	0.00	-541.20	0.00	541.20	1,110.07	555.04	1,348.86	675.43	123.82	-8.26	0.809
155.00	-5.75	-24.53	0.00	-498.03	0.00	498.03	1,101.79	550.89	1,320.21	661.09	126.85	-8.34	0.761
160.00	-4.34	-18.83	0.00	-375.37	0.00	375.37	1,077.04	538.52	1,238.66	620.25	135.74	-8.68	0.610
165.00	-3.87	-18.41	0.00	-281.24	0.00	281.24	1,050.68	525.34	1,157.73	579.72	144.96	-8.96	0.490
170.00	-2.67	-12.66	0.00	-189.18	0.00	189.18	1,022.72	511.36	1,077.64	539.62	154.44	-9.19	0.354
175.00	-2.33	-12.27	0.00	-125.90	0.00	125.90	993.16	496.58	998.64	500.06	164.12	-9.37	0.255
180.00	-1.29	-6.48	0.00	-64.57	0.00	64.57	961.99	481.00	920.96	461.16	173.97	-9.49	0.142
185.00	-1.06	-6.12	0.00	-32.18	0.00	32.18	929.22	464.61	844.81	423.03	183.91	-9.57	0.077
190.00	-0.14	-0.31	0.00	-1.56	0.00	1.56	894.85	447.42	770.45	385.80	193.90	-9.60	0.004
195.00	0.00	-0.29	0.00	0.00	0.00	0.00	858.87	429.43	698.09	349.57	203.90	-9.60	0.000

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



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Load Case: 1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.75 in Radial Ice	26 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

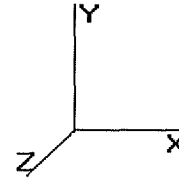
Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	1.860	2.047	0.000	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	1.860	2.047	0.000	1.200	1.242	5.00	27.444	32.93	67.4	490.8	1,998.5
10.00		1.00	0.85	1.860	2.047	0.000	1.200	1.331	5.00	27.026	32.43	66.4	517.1	1,996.5
15.00		1.00	0.85	1.860	2.047	0.000	1.200	1.386	5.00	26.580	31.90	65.3	528.8	1,979.9
20.00		1.00	0.90	1.974	2.171	0.000	1.200	1.427	5.00	26.121	31.35	68.1	534.2	1,957.1
25.00		1.00	0.94	2.069	2.276	0.000	1.200	1.459	5.00	25.656	30.79	70.1	535.9	1,930.5
30.00		1.00	0.98	2.150	2.365	0.000	1.200	1.486	5.00	25.186	30.22	71.5	535.2	1,901.5
35.00		1.00	1.01	2.221	2.443	0.000	1.200	1.509	5.00	24.713	29.66	72.4	532.7	1,870.8
38.25	Bot - Section 2	1.00	1.03	2.263	2.489	0.000	1.200	1.522	3.25	15.807	18.97	47.2	344.8	1,199.3
40.00		1.00	1.04	2.284	2.513	0.000	1.200	1.529	1.75	8.538	10.25	25.7	187.6	1,104.4
45.00		1.00	1.07	2.342	2.576	0.000	1.200	1.547	5.00	24.077	28.89	74.4	531.4	3,112.6
45.75	Top - Section 1	1.00	1.07	2.350	2.585	0.000	1.200	1.550	0.75	3.569	4.28	11.1	79.6	461.9
50.00		1.00	1.09	2.394	2.633	0.000	1.200	1.564	4.25	20.028	24.03	63.3	446.9	1,525.8
55.00		1.00	1.11	2.443	2.687	0.000	1.200	1.579	5.00	23.119	27.74	74.5	519.4	1,762.6
60.00		1.00	1.13	2.488	2.737	0.000	1.200	1.592	5.00	22.638	27.17	74.3	512.5	1,727.4
65.00		1.00	1.15	2.530	2.783	0.000	1.200	1.605	5.00	22.157	26.59	74.0	505.0	1,691.6
70.00		1.00	1.17	2.570	2.827	0.000	1.200	1.617	5.00	21.674	26.01	73.5	497.1	1,655.5
75.00		1.00	1.19	2.607	2.868	0.000	1.200	1.628	5.00	21.192	25.43	72.9	488.8	1,618.9
77.75	Bot - Section 3	1.00	1.20	2.627	2.890	0.000	1.200	1.634	2.75	11.448	13.74	39.7	266.2	875.7
80.00		1.00	1.20	2.643	2.907	0.000	1.200	1.639	2.25	9.377	11.25	32.7	218.9	1,127.8
84.25	Top - Section 2	1.00	1.22	2.672	2.939	0.000	1.200	1.647	4.25	17.446	20.93	61.5	407.1	2,095.2
85.00		1.00	1.22	2.677	2.945	0.000	1.200	1.649	0.75	3.042	3.65	10.7	71.6	206.4
90.00		1.00	1.23	2.709	2.980	0.000	1.200	1.658	5.00	20.004	24.01	71.5	468.3	1,353.3
95.00		1.00	1.25	2.740	3.014	0.000	1.200	1.667	5.00	19.519	23.42	70.6	458.8	1,320.2
100.00		1.00	1.26	2.770	3.047	0.000	1.200	1.676	5.00	19.034	22.84	69.6	449.0	1,286.9
105.00		1.00	1.27	2.799	3.079	0.000	1.200	1.684	5.00	18.549	22.26	68.5	439.0	1,253.3
110.00		1.00	1.29	2.826	3.109	0.000	1.200	1.692	5.00	18.063	21.68	67.4	428.8	1,219.6
112.2	Bot - Section 4	1.00	1.29	2.838	3.122	0.000	1.200	1.695	2.25	7.969	9.56	29.9	190.9	539.0
115.00		1.00	1.30	2.853	3.138	0.000	1.200	1.699	2.75	9.752	11.70	36.7	233.8	1,078.8
117.7	Top - Section 3	1.00	1.31	2.867	3.154	0.000	1.200	1.703	2.75	9.605	11.53	36.4	230.6	1,061.4
120.00		1.00	1.31	2.879	3.166	0.000	1.200	1.707	2.25	7.749	9.30	29.4	186.5	523.9
125.00		1.00	1.32	2.903	3.194	0.000	1.200	1.714	5.00	16.869	20.24	64.7	403.8	1,136.5
130.00		1.00	1.33	2.928	3.220	0.000	1.200	1.720	5.00	16.382	19.66	63.3	392.9	1,102.1
135.00		1.00	1.34	2.951	3.246	0.000	1.200	1.727	5.00	15.896	19.07	61.9	381.9	1,067.5
140.00		1.00	1.35	2.974	3.271	0.000	1.200	1.733	5.00	15.408	18.49	60.5	370.7	1,032.7
145.00		1.00	1.36	2.996	3.295	0.000	1.200	1.739	5.00	14.921	17.91	59.0	359.4	997.8
149.0	Bot - Section 5	1.00	1.37	3.013	3.314	0.000	1.200	1.744	4.00	11.586	13.90	46.1	280.2	774.0
150.00		1.00	1.37	3.017	3.319	0.000	1.200	1.745	1.00	2.879	3.45	11.5	70.4	265.4
153.2	Top - Section 4	1.00	1.38	3.031	3.334	0.000	1.200	1.749	3.25	9.223	11.07	36.9	224.0	847.2
155.00		1.00	1.38	3.038	3.342	0.000	1.200	1.751	1.75	4.881	5.86	19.6	119.2	243.9
160.00	Appertunance(s)	1.00	1.39	3.058	3.364	0.000	1.200	1.757	5.00	13.618	16.34	55.0	328.8	675.6
165.00		1.00	1.40	3.078	3.386	0.000	1.200	1.762	5.00	13.130	15.76	53.3	317.1	649.7
170.00	Appertunance(s)	1.00	1.41	3.098	3.407	0.000	1.200	1.767	5.00	12.642	15.17	51.7	305.2	623.7
175.00		1.00	1.42	3.117	3.428	0.000	1.200	1.772	5.00	12.154	14.58	50.0	293.2	597.5
180.00	Appertunance(s)	1.00	1.43	3.135	3.449	0.000	1.200	1.777	5.00	11.666	14.00	48.3	281.1	571.3
185.00		1.00	1.44	3.153	3.469	0.000	1.200	1.782	5.00	11.178	13.41	46.5	269.0	545.0
190.00	Appertunance(s)	1.00	1.44	3.171	3.488	0.000	1.200	1.787	5.00	10.689	12.83	44.7	256.7	518.6
195.00		1.00	1.45	3.188	3.507	0.000	1.200	1.792	5.00	10.201	12.24	42.9	244.4	492.1
Totals:									195.00			2,512.8	16,735.6	55,576.7

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.75 in Radial Ice	26 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

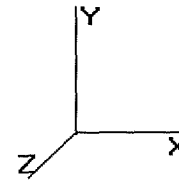
Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CAaA (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
160.0	105 Sq. Ft. w/ 10%i	1	3.058	3.364	1.00	1.00	178.77	0.000	0.000	601.42	0.00	0.00	3,989.38
170.0	105 Sq. Ft. w/ 10%i	1	3.098	3.407	1.00	1.00	179.22	0.000	0.000	610.67	0.00	0.00	4,004.76
180.0	105 Sq. Ft. w/ 10%i	1	3.135	3.449	1.00	1.00	179.65	0.000	0.000	619.53	0.00	0.00	4,019.35
190.0	105 Sq. Ft. w/ 10%i	1	3.171	3.488	1.00	1.00	180.05	0.000	0.000	628.04	0.00	0.00	4,033.22
										2,459.66			16,046.72

Pole : 281329
 Location : Center Point KY, KY
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 Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.75 in Radial Ice	26 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

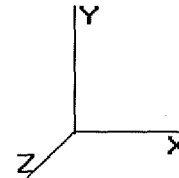
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	67.40	2,352.72	0.00	0.00
10.00	66.37	2,350.70	0.00	0.00
15.00	65.27	2,334.19	0.00	0.00
20.00	68.06	2,311.30	0.00	0.00
25.00	70.07	2,284.74	0.00	0.00
30.00	71.48	2,255.74	0.00	0.00
35.00	72.45	2,225.00	0.00	0.00
38.25	47.21	1,429.57	0.00	0.00
40.00	25.74	1,228.40	0.00	0.00
45.00	74.42	3,466.79	0.00	0.00
45.75	11.07	515.02	0.00	0.00
50.00	63.29	1,826.91	0.00	0.00
55.00	74.54	2,116.83	0.00	0.00
60.00	74.34	2,081.62	0.00	0.00
65.00	74.00	2,045.89	0.00	0.00
70.00	73.52	2,009.70	0.00	0.00
75.00	72.94	1,973.11	0.00	0.00
77.75	39.70	1,070.56	0.00	0.00
80.00	32.71	1,287.19	0.00	0.00
84.25	61.53	2,396.25	0.00	0.00
85.00	10.75	259.55	0.00	0.00
90.00	71.54	1,707.53	0.00	0.00
95.00	70.61	1,674.45	0.00	0.00
100.0	69.60	1,641.11	0.00	0.00
105.0	68.53	1,607.56	0.00	0.00
110.0	67.39	1,573.79	0.00	0.00
112.2	29.86	698.42	0.00	0.00
115.0	36.72	1,273.64	0.00	0.00
117.7	36.35	1,256.20	0.00	0.00
120.0	29.44	683.35	0.00	0.00
125.0	64.65	1,490.74	0.00	0.00
130.0	63.31	1,456.30	0.00	0.00
135.0	61.92	1,421.70	0.00	0.00
140.0	60.48	1,386.96	0.00	0.00
145.0	59.00	1,352.09	0.00	0.00
149.0	46.08	1,057.39	0.00	0.00
150.0	11.47	336.23	0.00	0.00
153.2	36.90	1,077.45	0.00	0.00
155.0	19.57	367.86	0.00	0.00
160.0	656.39	5,019.20	0.00	0.00
165.0	53.35	915.35	0.00	0.00
170.0	662.36	4,894.10	0.00	0.00
175.0	50.00	774.66	0.00	0.00
180.0	667.81	4,767.80	0.00	0.00
185.0	46.52	633.58	0.00	0.00
190.0	672.78	4,640.41	0.00	0.00
195.0	42.93	492.15	0.00	0.00
Totals:	4,972.43	84,021.80	0.00	0.00

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
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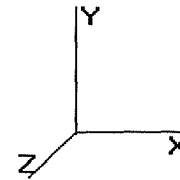
Load Case: 1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.75 in Radial Ice	26 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-84.02	-4.99	0.00	-729.46	0.00	729.46	4,576.28	2,288.14	11,797.9	5,907.74	0.00	0.00	0.142
5.00	-81.67	-4.96	0.00	-704.50	0.00	704.50	4,533.62	2,266.81	11,469.5	5,743.29	0.01	-0.03	0.141
10.00	-79.31	-4.94	0.00	-679.68	0.00	679.68	4,489.36	2,244.68	11,141.2	5,578.90	0.06	-0.06	0.140
15.00	-76.98	-4.91	0.00	-655.00	0.00	655.00	4,443.50	2,221.75	10,813.3	5,414.70	0.13	-0.08	0.138
20.00	-74.66	-4.87	0.00	-630.47	0.00	630.47	4,396.03	2,198.01	10,486.0	5,250.80	0.24	-0.11	0.137
25.00	-72.37	-4.84	0.00	-606.10	0.00	606.10	4,346.96	2,173.48	10,159.5	5,087.31	0.37	-0.14	0.136
30.00	-70.12	-4.80	0.00	-581.92	0.00	581.92	4,296.28	2,148.14	9,834.08	4,924.35	0.54	-0.17	0.134
35.00	-67.89	-4.75	0.00	-557.93	0.00	557.93	4,244.00	2,122.00	9,509.93	4,762.03	0.74	-0.21	0.133
38.25	-66.46	-4.71	0.00	-542.50	0.00	542.50	4,209.15	2,104.58	9,300.04	4,656.93	0.89	-0.23	0.132
40.00	-65.23	-4.71	0.00	-534.25	0.00	534.25	4,190.11	2,095.06	9,187.31	4,600.48	0.97	-0.24	0.132
45.00	-61.76	-4.64	0.00	-510.71	0.00	510.71	4,134.63	2,067.31	8,866.44	4,439.81	1.24	-0.27	0.130
45.75	-61.24	-4.64	0.00	-507.23	0.00	507.23	4,162.27	2,081.14	9,024.92	4,519.17	1.28	-0.28	0.127
50.00	-59.42	-4.60	0.00	-487.50	0.00	487.50	4,114.52	2,057.26	8,752.88	4,382.94	1.54	-0.30	0.126
55.00	-57.30	-4.55	0.00	-464.49	0.00	464.49	4,056.86	2,028.43	8,434.75	4,223.64	1.88	-0.34	0.124
60.00	-55.21	-4.49	0.00	-441.75	0.00	441.75	3,997.59	1,998.80	8,118.92	4,065.50	2.25	-0.37	0.122
65.00	-53.17	-4.44	0.00	-419.28	0.00	419.28	3,936.72	1,968.36	7,805.63	3,908.62	2.65	-0.40	0.121
70.00	-51.15	-4.38	0.00	-397.09	0.00	397.09	3,874.25	1,937.12	7,495.10	3,753.12	3.10	-0.44	0.119
75.00	-49.18	-4.32	0.00	-375.19	0.00	375.19	3,810.17	1,905.09	7,187.57	3,599.12	3.57	-0.47	0.117
77.75	-48.11	-4.28	0.00	-363.32	0.00	363.32	3,774.25	1,887.12	7,019.78	3,515.11	3.85	-0.49	0.116
80.00	-46.82	-4.26	0.00	-353.69	0.00	353.69	3,744.49	1,872.25	6,883.26	3,446.74	4.09	-0.51	0.115
84.25	-44.42	-4.19	0.00	-335.60	0.00	335.60	2,910.86	1,455.43	5,321.93	2,664.92	4.56	-0.54	0.141
85.00	-44.16	-4.19	0.00	-332.46	0.00	332.46	2,904.01	1,452.01	5,288.42	2,648.14	4.64	-0.55	0.141
90.00	-42.45	-4.14	0.00	-311.49	0.00	311.49	2,857.44	1,428.72	5,065.93	2,536.73	5.24	-0.59	0.138
95.00	-40.77	-4.08	0.00	-290.82	0.00	290.82	2,809.25	1,404.63	4,845.16	2,426.18	5.88	-0.63	0.134
100.00	-39.13	-4.02	0.00	-270.43	0.00	270.43	2,759.47	1,379.74	4,626.35	2,316.61	6.56	-0.67	0.131
105.00	-37.52	-3.96	0.00	-250.33	0.00	250.33	2,708.08	1,354.04	4,409.72	2,208.14	7.29	-0.72	0.127
110.00	-35.95	-3.89	0.00	-230.53	0.00	230.53	2,655.09	1,327.54	4,195.51	2,100.87	8.06	-0.76	0.123
112.25	-35.25	-3.87	0.00	-221.77	0.00	221.77	2,630.72	1,315.36	4,099.96	2,053.03	8.43	-0.78	0.121
115.00	-33.97	-3.83	0.00	-211.14	0.00	211.14	2,600.49	1,300.25	3,983.95	1,994.93	8.89	-0.81	0.119
117.75	-32.72	-3.79	0.00	-200.62	0.00	200.62	2,599.78	1,299.89	3,981.25	1,993.59	9.36	-0.83	0.113
120.00	-32.03	-3.76	0.00	-192.10	0.00	192.10	2,574.68	1,287.34	3,886.99	1,946.39	9.75	-0.85	0.111
125.00	-30.54	-3.70	0.00	-173.28	0.00	173.28	2,517.74	1,258.87	3,679.73	1,842.60	10.67	-0.89	0.106
130.00	-29.08	-3.63	0.00	-154.79	0.00	154.79	2,459.20	1,229.60	3,475.68	1,740.42	11.63	-0.93	0.101
135.00	-27.66	-3.57	0.00	-136.62	0.00	136.62	2,399.05	1,199.52	3,275.08	1,639.98	12.63	-0.98	0.095
140.00	-26.27	-3.50	0.00	-118.79	0.00	118.79	2,337.29	1,168.65	3,078.17	1,541.38	13.67	-1.01	0.088
145.00	-24.92	-3.43	0.00	-101.29	0.00	101.29	2,273.93	1,136.97	2,885.18	1,444.73	14.75	-1.05	0.081
149.00	-23.86	-3.37	0.00	-87.57	0.00	87.57	2,211.87	1,105.93	2,721.18	1,362.61	15.65	-1.08	0.075
150.00	-23.52	-3.36	0.00	-84.20	0.00	84.20	2,194.72	1,097.36	2,678.93	1,341.46	15.87	-1.09	0.073
153.25	-22.44	-3.31	0.00	-73.28	0.00	73.28	1,110.07	555.04	1,348.86	675.43	16.62	-1.11	0.129
155.00	-22.08	-3.29	0.00	-67.49	0.00	67.49	1,101.79	550.89	1,320.21	661.09	17.03	-1.12	0.122
160.00	-17.07	-2.55	0.00	-51.02	0.00	51.02	1,077.04	538.52	1,238.66	620.25	18.23	-1.17	0.098
165.00	-16.15	-2.49	0.00	-38.27	0.00	38.27	1,050.68	525.34	1,157.73	579.72	19.48	-1.21	0.081
170.00	-11.27	-1.73	0.00	-25.83	0.00	25.83	1,022.72	511.36	1,077.64	539.62	20.76	-1.24	0.059
175.00	-10.50	-1.66	0.00	-17.20	0.00	17.20	993.16	496.58	998.64	500.06	22.07	-1.26	0.045
180.00	-5.75	-0.89	0.00	-8.88	0.00	8.88	961.99	481.00	920.96	461.16	23.40	-1.28	0.025
185.00	-5.12	-0.83	0.00	-4.43	0.00	4.43	929.22	464.61	844.81	423.03	24.74	-1.29	0.016
190.00	-0.49	-0.05	0.00	-0.27	0.00	0.27	894.85	447.42	770.45	385.80	26.09	-1.29	0.001
195.00	0.00	-0.04	0.00	0.00	0.00	0.00	858.87	429.43	698.09	349.57	27.45	-1.29	0.000

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



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Load Case: 1.0D + 1.0W	60.00 mph Serviceability	26 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.00		
Wind Load Factor : 1.00		

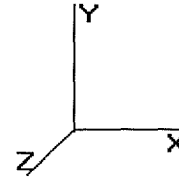
Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.186	294.89	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.186	289.45	0.650	0.000	5.00	26.409	17.17	140.5	0.0	1,256.4
10.00		1.00	0.85	7.442	8.186	284.00	0.650	0.000	5.00	25.917	16.85	137.9	0.0	1,232.8
15.00		1.00	0.85	7.442	8.186	278.55	0.650	0.000	5.00	25.424	16.53	135.3	0.0	1,209.3
20.00		1.00	0.90	7.896	8.686	281.32	0.650	0.000	5.00	24.932	16.21	140.8	0.0	1,185.7
25.00		1.00	0.94	8.276	9.104	282.26	0.650	0.000	5.00	24.440	15.89	144.6	0.0	1,162.1
30.00		1.00	0.98	8.600	9.460	281.88	0.650	0.000	5.00	23.948	15.57	147.3	0.0	1,138.6
35.00		1.00	1.01	8.883	9.772	280.54	0.650	0.000	5.00	23.455	15.25	149.0	0.0	1,115.0
38.25	Bot - Section 2	1.00	1.03	9.051	9.956	279.27	0.650	0.000	3.25	14.982	9.74	97.0	0.0	712.1
40.00		1.00	1.04	9.137	10.05	278.48	0.650	0.000	1.75	8.092	5.26	52.9	0.0	764.0
45.00		1.00	1.07	9.366	10.30	275.84	0.650	0.000	5.00	22.788	14.81	152.6	0.0	2,151.0
45.75	Top - Section 1	1.00	1.07	9.399	10.33	275.40	0.650	0.000	0.75	3.376	2.19	22.7	0.0	318.6
50.00		1.00	1.09	9.576	10.53	276.72	0.650	0.000	4.25	18.920	12.30	129.5	0.0	899.1
55.00		1.00	1.11	9.770	10.74	273.27	0.650	0.000	5.00	21.804	14.17	152.3	0.0	1,036.0
60.00		1.00	1.13	9.951	10.94	269.49	0.650	0.000	5.00	21.311	13.85	151.6	0.0	1,012.4
65.00		1.00	1.15	10.120	11.13	265.42	0.650	0.000	5.00	20.819	13.53	150.6	0.0	988.8
70.00		1.00	1.17	10.279	11.30	261.10	0.650	0.000	5.00	20.327	13.21	149.4	0.0	965.3
75.00		1.00	1.19	10.430	11.47	256.55	0.650	0.000	5.00	19.835	12.89	147.9	0.0	941.7
77.75	Bot - Section 3	1.00	1.20	10.509	11.56	253.97	0.650	0.000	2.75	10.699	6.95	80.4	0.0	507.9
80.00		1.00	1.20	10.572	11.62	251.81	0.650	0.000	2.25	8.762	5.70	66.2	0.0	757.4
84.25	Top - Section 2	1.00	1.22	10.688	11.75	247.64	0.650	0.000	4.25	16.279	10.58	124.4	0.0	1,406.7
85.00		1.00	1.22	10.708	11.77	250.40	0.650	0.000	0.75	2.836	1.84	21.7	0.0	112.3
90.00		1.00	1.23	10.838	11.92	245.34	0.650	0.000	5.00	18.622	12.10	144.3	0.0	737.5
95.00		1.00	1.25	10.962	12.05	240.13	0.650	0.000	5.00	18.130	11.78	142.1	0.0	717.8
100.00		1.00	1.26	11.081	12.18	234.78	0.650	0.000	5.00	17.638	11.46	139.7	0.0	698.2
105.00		1.00	1.27	11.195	12.31	229.31	0.650	0.000	5.00	17.145	11.14	137.2	0.0	678.6
110.00		1.00	1.29	11.305	12.43	223.72	0.650	0.000	5.00	16.653	10.82	134.6	0.0	658.9
112.2	Bot - Section 4	1.00	1.29	11.354	12.48	221.17	0.650	0.000	2.25	7.333	4.77	59.5	0.0	290.1
115.00		1.00	1.30	11.412	12.55	218.03	0.650	0.000	2.75	8.973	5.83	73.2	0.0	704.2
117.7	Top - Section 3	1.00	1.31	11.469	12.61	214.85	0.650	0.000	2.75	8.824	5.74	72.4	0.0	692.3
120.00		1.00	1.31	11.514	12.66	215.87	0.650	0.000	2.25	7.109	4.62	58.5	0.0	281.2
125.00		1.00	1.32	11.614	12.77	210.00	0.650	0.000	5.00	15.441	10.04	128.2	0.0	610.6
130.00		1.00	1.33	11.710	12.88	204.04	0.650	0.000	5.00	14.949	9.72	125.2	0.0	591.0
135.00		1.00	1.34	11.803	12.98	197.99	0.650	0.000	5.00	14.456	9.40	122.0	0.0	571.3
140.00		1.00	1.35	11.894	13.08	191.87	0.650	0.000	5.00	13.964	9.08	118.8	0.0	551.7
145.00		1.00	1.36	11.982	13.18	185.66	0.650	0.000	5.00	13.472	8.76	115.4	0.0	532.1
149.0	Bot - Section 5	1.00	1.37	12.051	13.25	180.65	0.650	0.000	4.00	10.423	6.78	89.8	0.0	411.5
150.00		1.00	1.37	12.068	13.27	179.39	0.650	0.000	1.00	2.588	1.68	22.3	0.0	162.5
153.2	Top - Section 4	1.00	1.38	12.123	13.33	175.28	0.650	0.000	3.25	8.276	5.38	71.7	0.0	519.4
155.00		1.00	1.38	12.152	13.36	175.30	0.650	0.000	1.75	4.370	2.84	38.0	0.0	103.9
160.00	Appertunance(s)	1.00	1.39	12.233	13.45	168.90	0.650	0.000	5.00	12.154	7.90	106.3	0.0	289.0
165.00		1.00	1.40	12.313	13.54	162.44	0.650	0.000	5.00	11.662	7.58	102.7	0.0	277.2
170.00	Appertunance(s)	1.00	1.41	12.390	13.62	155.93	0.650	0.000	5.00	11.169	7.26	99.0	0.0	265.4
175.00		1.00	1.42	12.466	13.71	149.36	0.650	0.000	5.00	10.677	6.94	95.2	0.0	253.6
180.00	Appertunance(s)	1.00	1.43	12.540	13.79	142.73	0.650	0.000	5.00	10.185	6.62	91.3	0.0	241.8
185.00		1.00	1.44	12.613	13.87	136.05	0.650	0.000	5.00	9.693	6.30	87.4	0.0	230.1
190.00	Appertunance(s)	1.00	1.44	12.684	13.95	129.33	0.650	0.000	5.00	9.200	5.98	83.4	0.0	218.3
195.00		1.00	1.45	12.753	14.02	122.55	0.650	0.000	5.00	8.708	5.66	79.4	0.0	206.5
Totals:									195.00			5,032.3	0.0	32,367.6

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case : 1.0D + 1.0W	60.00 mph Serviceability	26 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.00		
Wind Load Factor : 1.00		

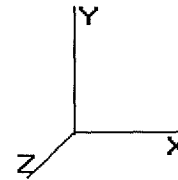
Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
160.0	105 Sq. Ft. w/ 10% i	1	12.233	13.457	1.00	1.00	105.00	0.000	0.000	1,412.94	0.00	0.00	1,800.00
170.0	105 Sq. Ft. w/ 10% i	1	12.390	13.629	1.00	1.00	105.00	0.000	0.000	1,431.09	0.00	0.00	1,800.00
180.0	105 Sq. Ft. w/ 10% i	1	12.540	13.794	1.00	1.00	105.00	0.000	0.000	1,448.41	0.00	0.00	1,800.00
190.0	105 Sq. Ft. w/ 10% i	1	12.684	13.952	1.00	1.00	105.00	0.000	0.000	1,464.99	0.00	0.00	1,800.00
										5,757.44			7,200.00

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 1.0D + 1.0W	60.00 mph Serviceability	26 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.00		
Wind Load Factor : 1.00		

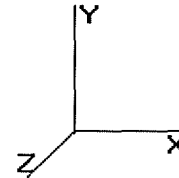
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	140.52	1,551.58	0.00	0.00
10.00	137.90	1,528.02	0.00	0.00
15.00	135.28	1,504.46	0.00	0.00
20.00	140.76	1,480.90	0.00	0.00
25.00	144.62	1,457.34	0.00	0.00
30.00	147.25	1,433.78	0.00	0.00
35.00	148.98	1,410.22	0.00	0.00
38.25	96.96	904.01	0.00	0.00
40.00	52.86	867.30	0.00	0.00
45.00	152.61	2,446.18	0.00	0.00
45.75	22.69	362.86	0.00	0.00
50.00	129.55	1,150.01	0.00	0.00
55.00	152.32	1,331.17	0.00	0.00
60.00	151.63	1,307.61	0.00	0.00
65.00	150.64	1,284.05	0.00	0.00
70.00	149.39	1,260.49	0.00	0.00
75.00	147.91	1,236.92	0.00	0.00
77.75	80.39	670.27	0.00	0.00
80.00	66.23	890.20	0.00	0.00
84.25	124.40	1,657.63	0.00	0.00
85.00	21.71	156.59	0.00	0.00
90.00	144.30	1,032.67	0.00	0.00
95.00	142.10	1,013.04	0.00	0.00
100.0	139.74	993.40	0.00	0.00
105.0	137.24	973.77	0.00	0.00
110.0	134.61	954.14	0.00	0.00
112.2	59.53	422.96	0.00	0.00
115.0	73.21	866.54	0.00	0.00
117.7	72.36	854.66	0.00	0.00
120.0	58.53	414.01	0.00	0.00
125.0	128.22	905.78	0.00	0.00
130.0	125.16	886.15	0.00	0.00
135.0	122.00	866.52	0.00	0.00
140.0	118.76	846.88	0.00	0.00
145.0	115.42	827.25	0.00	0.00
149.0	89.81	647.66	0.00	0.00
150.0	22.33	221.51	0.00	0.00
153.2	71.73	711.24	0.00	0.00
155.0	37.97	207.24	0.00	0.00
160.0	1,519.25	2,384.15	0.00	0.00
165.0	102.66	498.57	0.00	0.00
170.0	1,530.04	2,286.79	0.00	0.00
175.0	95.17	401.21	0.00	0.00
180.0	1,539.73	2,189.43	0.00	0.00
185.0	87.41	303.85	0.00	0.00
190.0	1,548.43	2,092.07	0.00	0.00
195.0	79.41	206.49	0.00	0.00
Totals:	10,789.73	49,899.58	0.00	0.00

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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Load Case: 1.0D + 1.0W	60.00 mph Serviceability	26 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.00		
Wind Load Factor : 1.00		

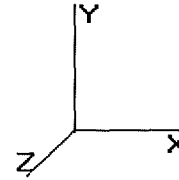
Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-49.89	-10.82	0.00	-1,540.01	0.00	1,540.01	4,576.28	2,288.14	11,797.9	5,907.74	0.00	0.00	0.272
5.00	-48.33	-10.72	0.00	-1,485.93	0.00	1,485.93	4,533.62	2,266.81	11,469.5	5,743.29	0.03	-0.06	0.269
10.00	-46.79	-10.63	0.00	-1,432.32	0.00	1,432.32	4,489.36	2,244.68	11,141.2	5,578.90	0.12	-0.12	0.267
15.00	-45.28	-10.54	0.00	-1,379.16	0.00	1,379.16	4,443.50	2,221.75	10,813.3	5,414.70	0.28	-0.18	0.265
20.00	-43.79	-10.44	0.00	-1,326.45	0.00	1,326.45	4,396.03	2,198.01	10,486.0	5,250.80	0.50	-0.24	0.263
25.00	-42.32	-10.34	0.00	-1,274.24	0.00	1,274.24	4,346.96	2,173.48	10,159.5	5,087.31	0.79	-0.30	0.260
30.00	-40.87	-10.23	0.00	-1,222.54	0.00	1,222.54	4,296.28	2,148.14	9,834.08	4,924.35	1.14	-0.37	0.258
35.00	-39.45	-10.11	0.00	-1,171.40	0.00	1,171.40	4,244.00	2,122.00	9,509.93	4,762.03	1.56	-0.43	0.255
38.25	-38.54	-10.03	0.00	-1,138.55	0.00	1,138.55	4,209.15	2,104.58	9,300.04	4,656.93	1.87	-0.48	0.254
40.00	-37.67	-10.00	0.00	-1,121.00	0.00	1,121.00	4,190.11	2,095.06	9,187.31	4,600.48	2.05	-0.50	0.253
45.00	-35.22	-9.85	0.00	-1,071.01	0.00	1,071.01	4,134.63	2,067.31	8,866.44	4,439.81	2.61	-0.57	0.250
45.75	-34.85	-9.84	0.00	-1,063.63	0.00	1,063.63	4,162.27	2,081.14	9,024.92	4,519.17	2.70	-0.58	0.244
50.00	-33.69	-9.74	0.00	-1,021.81	0.00	1,021.81	4,114.52	2,057.26	8,752.88	4,382.94	3.25	-0.64	0.241
55.00	-32.35	-9.61	0.00	-973.12	0.00	973.12	4,056.86	2,028.43	8,434.75	4,223.64	3.95	-0.71	0.238
60.00	-31.03	-9.48	0.00	-925.09	0.00	925.09	3,997.59	1,998.80	8,118.92	4,065.50	4.73	-0.78	0.235
65.00	-29.74	-9.35	0.00	-877.70	0.00	877.70	3,936.72	1,968.36	7,805.63	3,908.62	5.58	-0.85	0.232
70.00	-28.47	-9.21	0.00	-830.98	0.00	830.98	3,874.25	1,937.12	7,495.10	3,753.12	6.51	-0.92	0.229
75.00	-27.23	-9.07	0.00	-784.91	0.00	784.91	3,810.17	1,905.09	7,187.57	3,599.12	7.51	-0.99	0.225
77.75	-26.55	-9.00	0.00	-759.97	0.00	759.97	3,774.25	1,887.12	7,019.78	3,515.11	8.10	-1.04	0.223
80.00	-25.65	-8.94	0.00	-739.73	0.00	739.73	3,744.49	1,872.25	6,883.26	3,446.74	8.60	-1.07	0.221
84.25	-23.99	-8.80	0.00	-701.75	0.00	701.75	2,910.86	1,455.43	5,321.93	2,664.92	9.58	-1.13	0.272
85.00	-23.83	-8.79	0.00	-695.15	0.00	695.15	2,904.01	1,452.01	5,288.42	2,648.14	9.76	-1.15	0.271
90.00	-22.79	-8.66	0.00	-651.19	0.00	651.19	2,857.44	1,428.72	5,065.93	2,536.73	11.00	-1.23	0.265
95.00	-21.76	-8.53	0.00	-607.89	0.00	607.89	2,809.25	1,404.63	4,845.16	2,426.18	12.34	-1.32	0.258
100.00	-20.76	-8.40	0.00	-565.24	0.00	565.24	2,759.47	1,379.74	4,626.35	2,316.61	13.78	-1.41	0.252
105.00	-19.78	-8.27	0.00	-523.24	0.00	523.24	2,708.08	1,354.04	4,409.72	2,208.14	15.31	-1.50	0.244
110.00	-18.82	-8.13	0.00	-481.89	0.00	481.89	2,655.09	1,327.54	4,195.51	2,100.87	16.93	-1.60	0.237
112.25	-18.39	-8.07	0.00	-463.59	0.00	463.59	2,630.72	1,315.36	4,099.96	2,053.03	17.69	-1.64	0.233
115.00	-17.52	-7.99	0.00	-441.39	0.00	441.39	2,600.49	1,300.25	3,983.95	1,994.93	18.65	-1.69	0.228
117.75	-16.66	-7.91	0.00	-419.41	0.00	419.41	2,599.78	1,299.89	3,981.25	1,993.59	19.64	-1.74	0.217
120.00	-16.24	-7.86	0.00	-401.61	0.00	401.61	2,574.68	1,287.34	3,886.99	1,946.39	20.47	-1.78	0.213
125.00	-15.33	-7.72	0.00	-362.34	0.00	362.34	2,517.74	1,258.87	3,679.73	1,842.60	22.39	-1.87	0.203
130.00	-14.43	-7.59	0.00	-323.73	0.00	323.73	2,459.20	1,229.60	3,475.68	1,740.42	24.40	-1.96	0.192
135.00	-13.56	-7.46	0.00	-285.79	0.00	285.79	2,399.05	1,199.52	3,275.08	1,639.98	26.49	-2.04	0.180
140.00	-12.71	-7.32	0.00	-248.51	0.00	248.51	2,337.29	1,168.65	3,078.17	1,541.38	28.68	-2.13	0.167
145.00	-11.88	-7.19	0.00	-211.88	0.00	211.88	2,273.93	1,136.97	2,885.18	1,444.73	30.94	-2.20	0.152
149.00	-11.23	-7.08	0.00	-183.11	0.00	183.11	2,211.87	1,105.93	2,721.18	1,362.61	32.82	-2.26	0.140
150.00	-11.01	-7.06	0.00	-176.03	0.00	176.03	2,194.72	1,097.36	2,678.93	1,341.46	33.29	-2.28	0.136
153.25	-10.29	-6.97	0.00	-153.09	0.00	153.09	1,110.07	555.04	1,348.86	675.43	34.86	-2.33	0.236
155.00	-10.08	-6.93	0.00	-140.90	0.00	140.90	1,101.79	550.89	1,320.21	661.09	35.72	-2.35	0.222
160.00	-7.75	-5.32	0.00	-106.25	0.00	106.25	1,077.04	538.52	1,238.66	620.25	38.23	-2.44	0.179
165.00	-7.25	-5.21	0.00	-79.63	0.00	79.63	1,050.68	525.34	1,157.73	579.72	40.83	-2.52	0.144
170.00	-5.03	-3.58	0.00	-53.58	0.00	53.58	1,022.72	511.36	1,077.64	539.62	43.51	-2.59	0.104
175.00	-4.64	-3.47	0.00	-35.66	0.00	35.66	993.16	496.58	998.64	500.06	46.25	-2.64	0.076
180.00	-2.52	-1.84	0.00	-18.29	0.00	18.29	961.99	481.00	920.96	461.16	49.04	-2.68	0.042
185.00	-2.22	-1.73	0.00	-9.12	0.00	9.12	929.22	464.61	844.81	423.03	51.85	-2.70	0.024
190.00	-0.20	-0.09	0.00	-0.45	0.00	0.45	894.85	447.42	770.45	385.80	54.68	-2.70	0.001
195.00	0.00	-0.08	0.00	0.00	0.00	0.00	858.87	429.43	698.09	349.57	57.51	-2.70	0.000

Pole : 281329
 Location : Center Point KY, KY
 Height : 195.0 (ft)
 Base Dia : 63.00 (in)
 Top Dia : 20.00 (in)
 Shape : 18 Sides
 Taper : 0.232692 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

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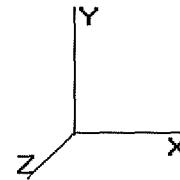
Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	38.96	0.00	59.81	0.00	0.00	5578.65	84.25	0.96
0.9D + 1.6W	38.93	0.00	44.84	0.00	0.00	5497.50	84.25	0.94
1.2D + 1.0Di + 1.0Wi	4.99	0.00	84.02	0.00	0.00	729.46	0.00	0.14
1.0D + 1.0W	10.82	0.00	49.89	0.00	0.00	1540.01	84.25	0.27

Pole : 281329
 Location : Center Point KY, KY
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Base Summary

Reactions

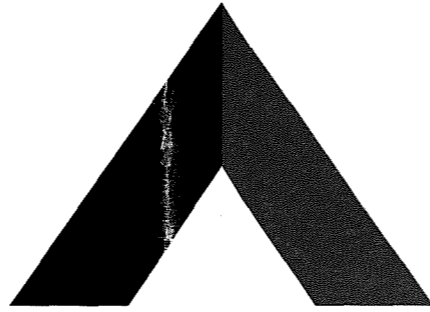
Original Design			Analysis			Moment Design %
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	
5,550.00	62.00	40.00	5,578.65	84.02	38.96	100.52

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
60.0	2.000	76.000	Round	0	0.00	12.497	519.18	674.85	0.77

Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Start Angle (deg)	Compression			Tension		
									Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
70.00	16	2.25" 18J	2.25	75.00	100.00	Radial	0.00	0.0	244.34	260.00	0.96	233.83	260.00	0.92



**AMERICAN TOWER®
CORPORATION**

ATC TOWER SERVICES, INC.
8505 FREEPORT PARKWAY
SUITE 135
IRVING, TX 75063
PHONE: (972) 999-8900 / FAX: (972) 999-8940

281329 - CENTER POINT KY, KY

PROJECT DESCRIPTION

PROPOSED NEW FOUNDATION DESIGN FOR A 195' "TRANSAMERICAN" MONOPOLE.

AS-BUILT SIGN-OFF

DESCRIPTION	SIGNATURE	DATE
CONTRACTOR NAME		
CONTRACTOR REPRESENTATIVE (PRINT NAME)		
CONTRACTOR REPRESENTATIVE (SIGNATURE)		
REDEVELOPMENT P.M. (PRINT NAME)		
REDEVELOPMENT P.M. (SIGNATURE)		

PROJECT SUMMARY

ATC PROJECT NUMBER: 55056571

CUSTOMER: OPERATIONS STRUCTURAL

CUSTOMER SITE NUMBER: N/A

CUSTOMER SITE NAME: N/A

SITE ADDRESS: TOMPKINSVILLE, KY 42167-8675

DATE: 11/20/13

REVISION: 0

SHEET	SHEET TITLE	REV.
BOM	BILL OF MATERIALS (1 PAGE)	0
IGN	IBC GENERAL NOTES	0
A-1	PIER AND PAD FOUNDATION DETAILS	0
A-RL	BAR LIST FOR REINFORCING STEEL AND GENERAL NOTES	0



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the state of Kentucky.

GENERAL

- ALL METHODS, MATERIALS AND WORKMANSHIP SHALL FOLLOW THE DICTATES OF GOOD CONSTRUCTION PRACTICE.
- ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
- ANY SUBSTITUTIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- ANY MANUFACTURED DESIGN ELEMENTS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER TIA-1019-A-2011, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
- CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

- ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- ALL U-BOLTS SHALL BE ASTM A307 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
- FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
- ALL FIELD CUT SURFACES AND FIELD DRILLED HOLES SHALL BE REPAIRED WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.

WELDING

- ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
- ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
- PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

BOLT TIGHTENING PROCEDURE

- STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC-2004 (SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS.)
- TIGHTEN FLANGE BOLTS BY AISC "TURN-OF-THE-NUT" METHOD, USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

- SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

8.2.1 TURN-OF-NUT PRETENSIONING
BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

- ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

PAINT

- AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1K.

APPLICABLE CODES AND STANDARDS

- ANSI/TIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-G EDITION.
- 2012 INTERNATIONAL BUILDING CODE.
- 2013 KENTUCKY BUILDING CODE.
- ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-05.
- CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
- AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

SUMMARY OF SPECIAL INSPECTIONS		
VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
1. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES.	X	-
2. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	-	X
3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	X	-
4. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X
5. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-



AMERICAN TOWER®
ATC TOWER SERVICES, INC.

8505 FREEPORT PARKWAY
SUITE 135
IRVING, TX 75063
PHONE: (972) 999-8900
FAX: (972) 999-8940
NYSE AMT

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REV.	DESCRIPTION	BY	DATE
△	FIRST ISSUE	CDL	11/20/13
△			
△			
△			

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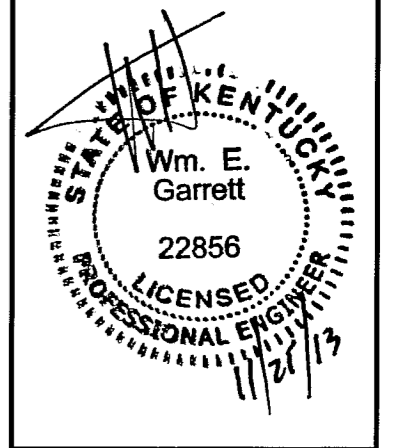
281329

ATC SITE NAME:

CENTER POINT KY, KY

SITE ADDRESS:

TOMPKINSVILLE, KY 42167-8675



DRAWN BY:	CDL
APPROVED BY:	RAM
DATE DRAWN:	11/20/13
JOB NO:	55056571

SHEET TITLE:
IBC GENERAL NOTES

SHEET NUMBER: IGN	REV. # 0
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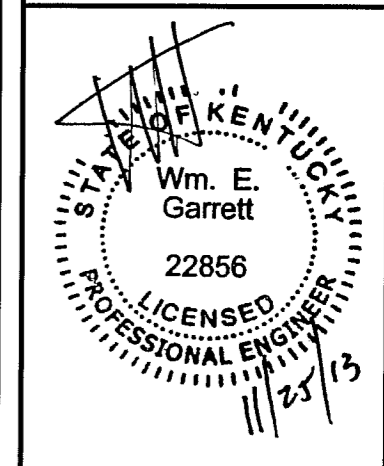
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0	FIRST ISSUE	CDL	11/20/13

ATC SITE NUMBER:
281329

ATC SITE NAME:
CENTER POINT KY, KY

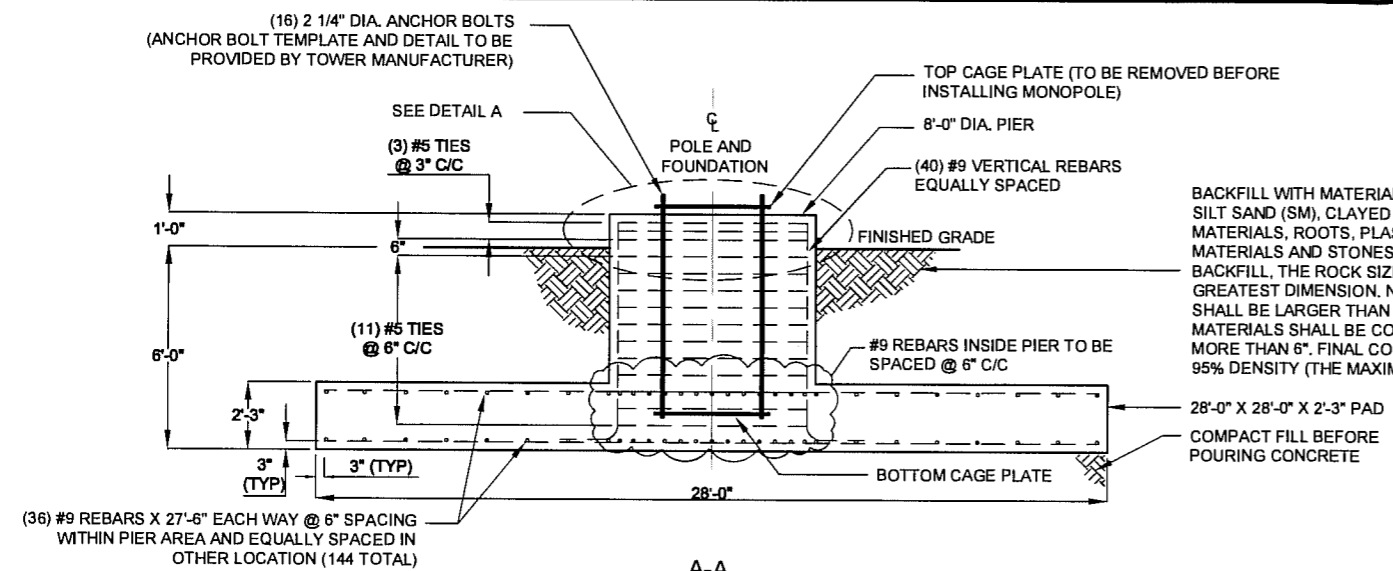
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TOMPKINSVILLE, KY 42167-8675



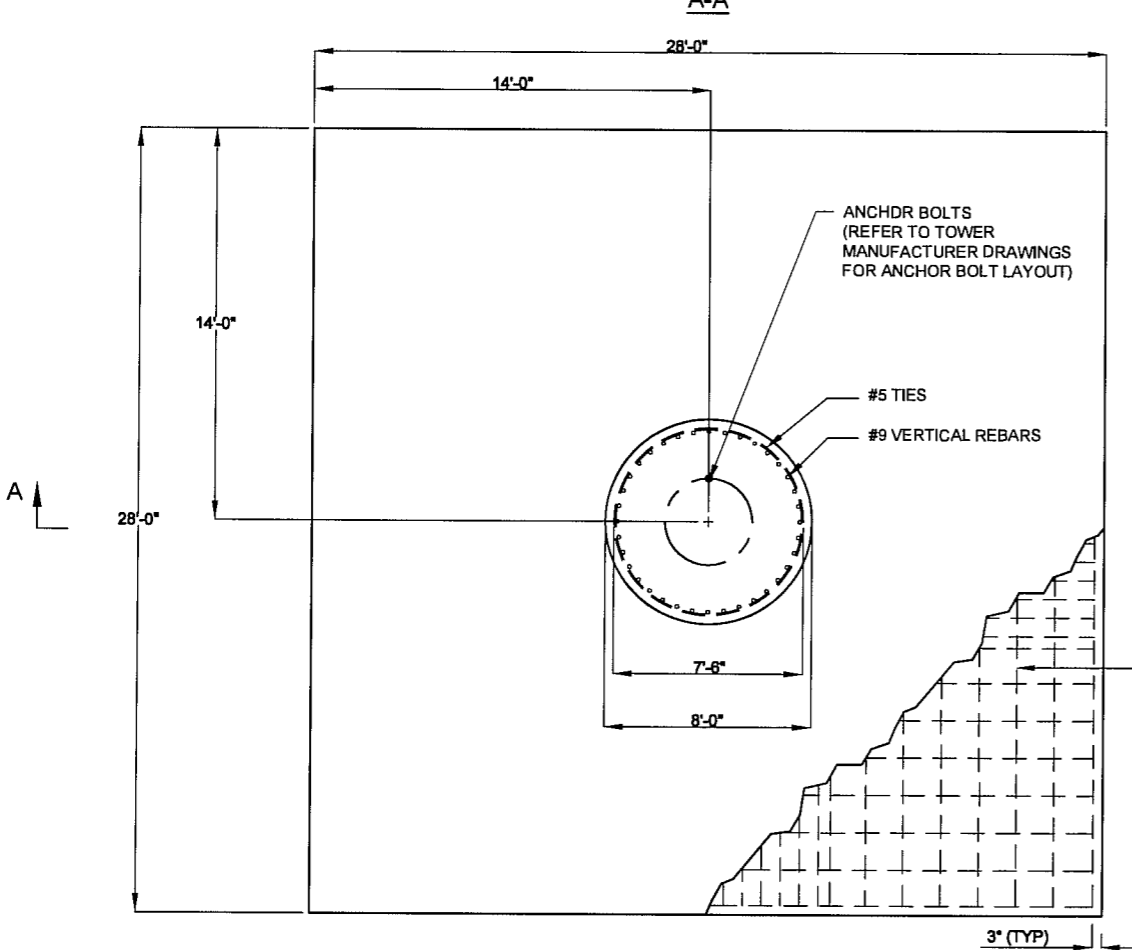
DRAWN BY:	CDL
APPROVED BY:	RAM
DATE DRAWN:	11/20/13
JOB NO:	55056571

SHEET TITLE:
PIER AND PAD FOUNDATION DETAILS

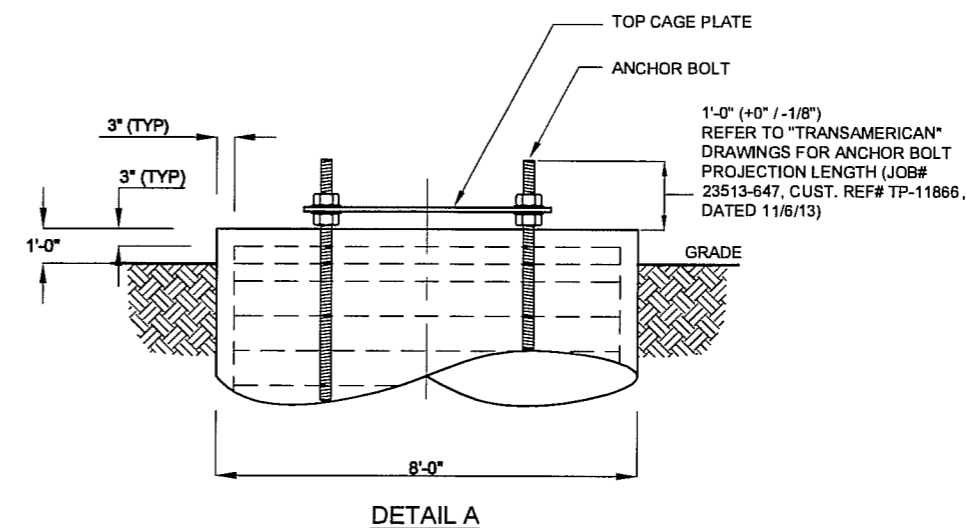
SHEET NUMBER:	REV. #
A-1	0



BACKFILL WITH MATERIAL THAT CONSISTS OF SANDY SILT (ML), SILT SAND (SM), CLAYED SAND (SC) CONTAINING NO ORGANIC MATERIALS, ROOTS, PLASTIC SILTS OR CLAYS, DELETERIOUS MATERIALS AND STONES. IF ROCK/SOIL MIXTURE IS USED AS BACKFILL, THE ROCK SIZE SHOULD BE LESS THAN 4" IN GREATEST DIMENSION, NOT MORE THAN 15% BY WEIGHT SHALL BE LARGER THAN 2" IN GREATEST DIMENSION. FILL MATERIALS SHALL BE COMPACTED USING LAYERS OF NO MORE THAN 6". FINAL COMPACTION MUST BE A MINIMUM OF 95% DENSITY (THE MAXIMUM DRY UNIT OF WEIGHT).



MONOPOLE BASE REACTIONS
 MOMENT = 5550.0 KIPS-FT
 SHEAR = 40.0 KIPS
 AXIAL = 62.0 KIPS
 CONCRETE VOLUME = 74.2 CUBIC YARDS



(36) #9 REBARS X 27'-6" EACH WAY ON TWO LEVELS @ 6" SPACING WITHIN PIER AREA AND EQUALLY SPACED IN OTHER LOCATION (144 TOTAL)

PLAN VIEW

- NOTES**
1. PROPOSED NEW FOUNDATION DESIGN FOR A "TRANSAMERICAN" 195' MONOPOLE (JOB# 23513-647, CUST. REF# TP-11866, DATED 11/6/13). REFERENCE TOWER MANUFACTURER DRAWINGS FOR ANCHOR BOLT INSTALLATION REQUIREMENTS.
 2. PROPOSED NEW FOUNDATION DESIGN REACTIONS WERE OBTAINED FROM TOWER MANUFACTURER DESIGN DRAWINGS (JOB# 23513-647, CUST. REF# TP-11866, DATED 11/6/13).
 3. PROPOSED NEW FOUNDATION DESIGN WAS BASED ON SOIL REPORT PROVIDED BY "FSTAN LAND SURVEYORS & CONSULTING ENGINEERS" WITH PROJECT# 13-8641, DATED 9/13/13. REFERENCE THE SOIL REPORT FOR ADDITIONAL CONSIDERATIONS AND REQUIREMENTS.
 4. IF THE SOIL PARAMETERS ENCOUNTERED DURING CONSTRUCTION ARE SIGNIFICANTLY DIFFERENT FROM WHAT WERE INDICATED IN THE SOIL REPORT, PLEASE REPORT FINDINGS TO ATC ENGINEERING FOR FURTHER INSTRUCTION.
 5. DUE TO THE PRESENCE OF WEATHERED LIMESTONE AT 5 FT. BELOW THE GRADE SURFACE, THE USE OF HEAVY TOOLS, EQUIPMENT OR ROCK BITS WILL BE REQUIRED IN CONSTRUCTION.
 6. CONCRETE SLUMP: 2"-4"
 7. FOUNDATION BASE SHOULD REST ON FIRM AND LEVELLED SURFACE.

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REV.	DESCRIPTION	BY	DATE
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3			

ATC SITE NUMBER:

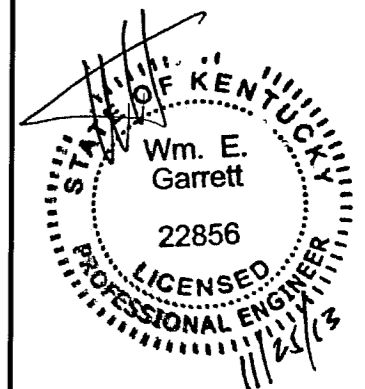
281329

ATC SITE NAME:

CENTER POINT KY, KY

SITE ADDRESS:

TOMPKINSVILLE, KY 42167-8675



DRAWN BY:	CDL
APPROVED BY:	RAM
DATE DRAWN:	11/20/13
JOB NO:	55056571

SHEET TITLE:
**BAR LIST FOR
 REINFORCING
 STEEL AND
 GENERAL NOTES**

SHEET NUMBER:	REV.#
A-RL	0

QTY REQ'D	REBAR SIZE	LENGTH	TOTAL WEIGHT (LBS)	TYPE	BENDING DIAGRAM					
					A	B	C	D	INSIDE RADIUS	
-	-	-	-	ROUND TIE	A	B				
14	#5	24' - 7"	359		7' - 6"	1' - 2"				
-	-	-	-	90° BEND VERTICAL	A	B	C	D	INSIDE RADIUS	
40	#9	7' - 9 1/2"	1060		6' - 3"	1' - 9 5/8"	1' - 4"	5' - 9 1/2"	4 - 1/2"	
-	-	-	-	SQUARE OR RECTANGULAR TIE	A	B	C	INSIDE RAD.		
-	-	-	-	U-SHAPE 90° BEND	A	B	C	D	INSIDE RADIUS	
-	-	-	-	STRAIGHT	A					
144	#9	27' - 6"	13464		27' - 6"					

GENERAL FOUNDATION CONSTRUCTION NOTES

- ALL REBAR (HORIZONTAL & VERTICAL) SHALL BE SECURELY WIRE TIED TO PREVENT DISPLACEMENT DURING POURING OF CONCRETE.
- CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS AND A MAXIMUM W/C RATIO NOT EXCEEDING 0.45.
- REINFORCED CONCRETE CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ACI STANDARDS 318.
- MINIMUM CONCRETE COVER OVER REBAR IS 3".
- BACKFILL SHALL BE SELECTED MATERIAL, WELL COMPACTED IN LAYERS NOT EXCEEDING 12".
- BACKFILL SHALL BE PLACED SO AS TO PREVENT ACCUMULATION OF WATER AROUND THE FOUNDATION.
- REINFORCING MATERIAL SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION A615-85.
- ALL REBAR TO BE GRADE 60 (UNLESS NOTED).

FOUNDATION AND ANCHOR TOLERANCES

- VERTICAL EMBEDMENTS OUT OF PLUMB: 1.0 DEGREE.
- DRILLED FOUNDATION OUT OF PLUMB: 1.0 DEGREE.
- DEPTH OF FOUNDATION: PLUS 3" (76mm) OR MINUS 0".
- PROJECTIONS OF EMBEDMENTS: PLUS OR MINUS 1/4" (6mm).
- CONCRETE DIMENSIONS: PLUS OR MINUS 1" (25mm).
- REINFORCING STEEL PLACEMENT: PLUS OR MINUS 1/2" INCLUDING CONCRETE COVER.
- FOLLOWING ARE THE MINIMUM OVERLAP LENGTHS OF REBARS IF REQUIRED:
 - #6 BARS = 2'-0"
 - #8 BARS = 2'-8"
 - #9 BARS = 3'-0"
 - #10 BARS = 3'-6"
 - #11 BARS = 4'-0"



11/7/13

Dear Commissioners:

The construction manager for the proposed new communications facility will be Ron Rohr. His contact information is 740-438-9710. Ron Rohr has been involved in the construction of communications facilities for over 17 years, and general construction for over 20 years.

Some of the notable and most recent projects are:

2010 - Present

American Tower Corporation – Construction Manager

- Successfully led the construction team on the 140 site, Southern Ohio Launch while maintaining a respectful and professional demeanor under difficult circumstances.
- Played a key part in the collaborating efforts to build the scope of work, pricing matrix, and close out documentation on several projects.
- Have cultivated a pool of responsible, dependable and quality driven GC's to work on ATC projects throughout the Midwest and Northeast Region.

1990 – 2009

Superior Concepts – Owner

- Contract Project and Construction Manager to multiple wireless carriers. Work included, but not limited to, permitting all the way through to final construction close outs. Also managed several DAS projects in shopping malls and residential areas.
- Equipment operator, cell site super intendant, regional foreman, etc...
- Carpentry, Construction and Consulting

Accreditations and Licenses

OSHA Electrical Safety
Vallen Safety Knowledge Systems / Fall Protection
Builders Exchange of Central Ohio / Estimating & Bid Preparation
Amphenol Wireless Cable Connector Training
Commscope Connector Training
Andrew Connector Training
Current OSHA Safety Training
Current Haz Com Training
FAA/FCC Training

Thank you,

A handwritten signature in black ink that reads "Ron Rohr".

Ron Rohr
Construction Manager

RAPHAEL I. MOHAMED, MBA, PE, PEng

6921 Palaver Lane
Cary, NC 27519

(919) 244-5207 (Mobile)

raphael.mohamed@americantower.com

Profile Summary

Proven telecommunications manager with strong engineering and analytical skills. Certified Professional Engineer who applies top-tier graduate business school education to achieve goals for high-growth organizations. Yellow belt Six Sigma dedicated to continuous learning. Seeking a telecommunications strategic implementation position that will leverage my formal engineering and management education and my extensive wireless industry experience in an S&P 500 company.

Holds American, Canadian and EU passports. Fluent in English and French. Conversational Spanish and Portuguese.

Selected Accomplishments

- Led high-performing engineering team that produced over 17,000 engineering deliverables and achieved departmental revenue of \$30M+, operating profit margins in excess of 80%, and industry-leading cycle times for multi-year periods.
- Recruited and hired 15 engineers in 2 year period.
- Recipient of numerous individual and team recognition rewards including the All American, Hire Good People & Empower Them, Engineering Services Employee of the Quarter, Engineer of the Quarter, and Structural Engineering Team and Individual Awards.
- Created a guy anchor inspection business plan that mitigated tower portfolio risk and contributed to having no engineering-related tower collapses in over 12 years.
- Promoted 4 times in 12 years earning increased responsibility with each transition.
- Committee Sub-Chair for TIA-222-H: Plans, Assembly Tolerances, Marking, Maintenance and Condition Assessment

Professional Experience

AMERICAN TOWER CORPORATION (S&P 500 Company), Cary, NC

Engineering Manager, US Tower Division

2005-Present

- Managed up to 27 structural /electrical engineers responsible for the safety and integrity of a US-based portfolio of ± 24,000 telecommunications towers.
- Attested to quality of engineering work by stamping engineering documents (PE letters, structural analyses, modification designs, jurisdictional letters, A&E drawings).
- Developed new relationships and maintained existing relationships with internal customers, major wireless providers (AT&T, Verizon, T-Mobile, Sprint/Nextel), construction field offices, engineering consultants and governmental municipal agencies.
- Led training initiatives and engineering process recommendations for international offices including Brazil, South Africa, Uganda, Ghana, India and Mexico. Assisted with structural analysis and modification designs for African and Latin American markets.
- Served as company subject matter expert at jurisdictional zoning meetings and industry conferences.

Senior Design Engineer

2004-2005

Senior Project Engineer

2002-2004

Project Engineer

2001-2002

Project Administrator

2000-2001

MORRISON HERSHFIELD ENGINEERING CONSULTING, Atlanta, GA

Project Consultant, Telecommunications Division

2000-2001

- Served as an internal consultant for SpectraSite Communications that brought in over \$3M of revenue.

MORRISON HERSHFIELD ENGINEERING CONSULTING, Toronto, ON, Canada 1998-2000
Project Engineer, Structural Subdivision of Transportation Department

- Awarded new design proposals for over \$15M in construction contracts through prepared proposals to government agencies.
- Prevented budget overages and avoided delay in scheduling for completion of \$2M bridge rehabilitation project through on-site supervision of construction.
- Conducted structural site condition surveys including AutoCAD drawings of required remediation.

HUANG & ASSOCIATES GEOTECHNICAL CONSULTING, Markham, ON, Canada 1997
Geotechnical Engineer

- Provided general quality control on residential & commercial sites involving concrete/soils testing.
- Surveyed borehole locations.
- Conducted laboratory testing of soils (e.g. proctor/grading/moisture).

BRISBIN BROOK BEYNON ARCHITECTS, Toronto, ON, Canada 1993
Co-op Student

- Produced AutoCAD drawings for architects.
- Created computer-animated walkthroughs of models using 3D Studio.

Education

DUKE UNIVERSITY, The Fuqua School of Business, Durham, NC

Master of Business Administration. 2008. GPA: 3.83/4.00.

Relevant courses include Strategy, Managerial Effectiveness, Leadership, Managerial Accounting, and Operations.

UNIVERSITY OF TORONTO, Ontario, Canada

Bachelor of Applied Science, Civil Engineering. 1998. Honors.

Certification

PROFESSIONAL ENGINEER DESIGNATION: Active Licensure in 44 States and 1 Canadian Province

Professional Development

Six Sigma Process Excellence Program: Yellow Belt

Leadership Courses: Harvard Mentor Management Program, Center for Creative Leadership, MIT Managing Technical Professionals, American Management Association, Duke Managerial Effectiveness & Leadership and Development

Professional Engineering Development Hours: 15+ Hours Completed Annually

Professional Society Memberships: TIA/EIA Committee, National Council of Examiners for Engineers and Surveyors, American and Canadian Society of Civil Engineers, American Society of Civil Engineers, National Society of Professional Engineers, North Carolina Structural Engineers Association, International Association of Spatial Structures, American Management Association



GRAVES & GRAVES CONSTRUCTION COMPANY, INC.

General Contractors

POST OFFICE BOX 370 / PARSONS, TENNESSEE 38363

TELEPHONE (731)847-6391

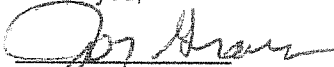
November 6, 2013

RE:

Dear Commissioners:

The General Contractor for the proposed new communications facility will be Graves and Graves Construction Company INC. Graves and Graves contact information is 1267 West Main Street; Parsons, TN 38363, Contact persons would be either Jon Graves or Kent Hamm and they can both be reached at (731)-847-6391. Graves and Graves Construction Company has been involved with construction of communication sites for over 30 years and a listing of recent job experience is attached.

Thank you,



Jon Graves President

Graves and Graves Construction Co., INC**Construction Experience List**

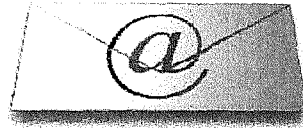
Name of Project	Owner's Name	Contract Amount	Completion Date
Mt. Jackson VA	Verizon Business	526,008.00	10/19/2011
Carson, MS	Crown Castle	190,795.00	06/30/2011
Gismonda, AR	Verizon Wireless	192,917.00	12/07/2011
Danzler	American Tower	202,185.00	07/09/2012
Lafayette Springs	American Tower	204,536.00	06/29/2012
Kimberlin Heights	American Tower	206,110.00	09/27/2012
Amity AR	Verizon Wireless	192,034.00	08/08/2013
Fisher Rd Paducah Ky	American Tower	154,260.00	09/17/2013
Newman KY	American Tower	137,512.00	08/14/2013
East Tallassee	American Tower	145,791.00	05/23/2013

FStan Email Staff

WHEN IS A SURVEY NEEDED?

It is a good idea to have a property survey:

- When buying, selling, investing in or developing property.
- If a boundary location is unknown or unclear.
- Before improvements are made (buildings, fences, excavation, etc.)
- To identify encroachments from adjoining owners.
- To establish easements and rights of way.
- When timber is cut near a property boundary line.
- When recommended by a lending institution.
- When dividing a large tract of land into a smaller tract or tracts.



Frank Sellinger, P.L.S.
frank@fstan.com

Frank Sellinger, Sr., P.L.S.
flssr@fstan.com

Buddy Mabrey
buddy@fstan.com

Walter Martin, P.E. & P.L.S
walter@fstan.com

Samuel Shade, LSIT
sam@fstan.com

Founded in 1974, FS/tan Land Surveyors & Consulting Engineers (formerly F.S. Land & T. Alan Neal Companies) provides professional service in the ever changing competitive marketplace. Our office is conveniently located in Louisville, Kentucky. However, we also provide services to our clients in numerous states throughout the Midwest Region.



FS/tan has grown to be an exceptional firm with a reputation of excellence – in both the quality of technical services provided and responsiveness to the needs of our clients.

The success of our organization is directly attributed to the experience and commitment of our team. Give us a chance to prove we deserve a place on your project.

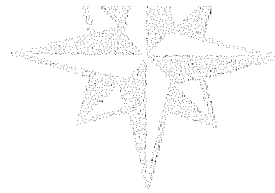
FS tan
Land Surveyors
& Consulting Engineers

Company Resume' 2013



We are a full-service Land Surveying and A & E Firm and offer the following disciplines and services:

- Alta/ ACSM Land Title Surveys
- Utility Easement Surveys
- Land Surveying
- GPS Control
- Civil Engineering
- Sanitary Sewer Design
- Telecommunication Site Development
- Site Design
- Construction Design Drawings
- Zoning Documents
- NEPA Reports
- Geotechnical Investigations
- FAA Filings
- Construction Staking
- Waste Water Treatment Design
- Flood Certifications
- Building Permits
- Minor Plats
- As-Built Surveys

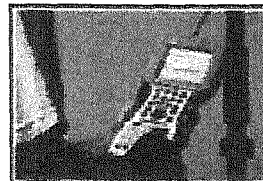


Executive Summary

FS/ta Land Surveyors & Consulting Engineers collectively has over 75 years of surveying and engineering experience in meeting our client's needs and exceeding their expectations. We do this by providing clients with an experienced team, a proven set of process controls, resource management and effective communication with all levels of our team. Our internal database has information on over 50,000 sites in the region. We also have experience in designing over 5000 wireless sites for rooftop, raw land and collocation projects.

In addition to the experience and commitment of our team, our Quality Control Process plays a major role in our production of high quality designs.

Typically, the process begins with a Professional reviewing the site. Preliminary drawings are submitted to the applicable Department for Technical Review. Comments are addressed and the drawings are often re-submitted for a Client Feasibility Review. All in an effort to produce the highest quality product for the ever changing competitive market place.



526 E Warnock St
Louisville, Kentucky 40217

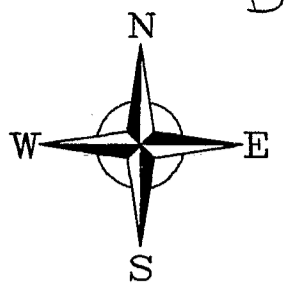
(502)636-5111
Administration - (ext.) 106
A & E - ext. 110
Wireless - ext. 109
Accounting - ext. 104
www.fs/ta.com

EXHIBIT D
COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST
AND MAP OF LIKE FACILITIES IN VICINITY

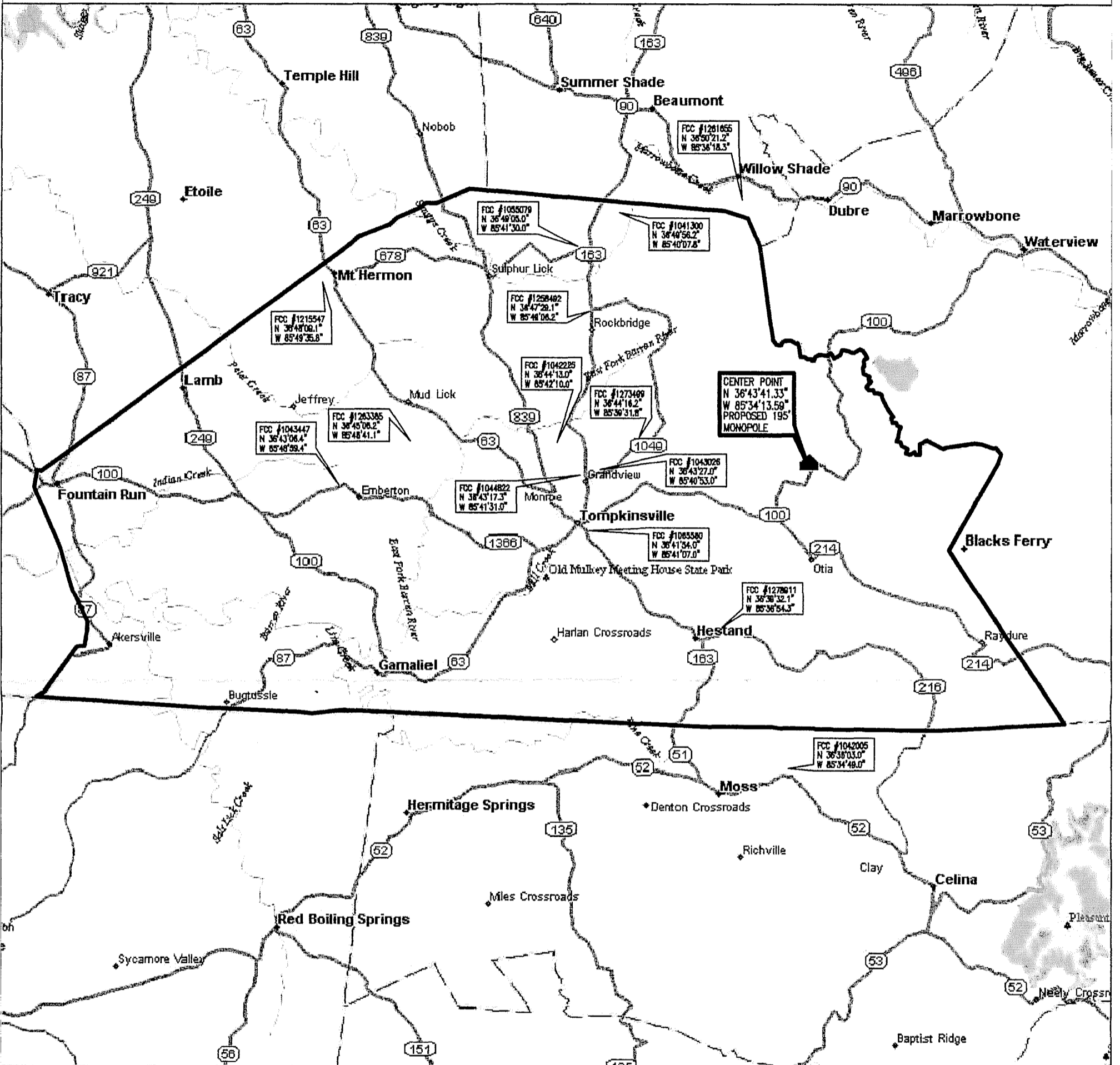
MONROE COUNTY, KENTUCKY

AT&T SITE NAME: CENTER POINT

TOWER LOCATION EXHIBIT



TOWERS DEPICTED ARE ALL KNOWN CONSTRUCTED TOWER SITES REGISTERED WITH THE FEDERAL COMMUNICATIONS COMMISSION IN MONROE COUNTY, KENTUCKY



7.5 MINUTE U.S.G.S. QUADRANGLE MAP (NOT TO SCALE)

AUGUST 30, 2013
FSTAN PROJECT NO. 13-8707

Registration #	Status	File #	Owner Name
1041300	Constructed	A0337420	TEXAS EASTERN COMMUNICATIONS, INC.
1042225	Constructed	A0637047	Global Tower, LLC
1043026	Constructed	A0050688	WHITTIMORE ENTERPRISES INC DBA = WTKY AM FM
1043447	Constructed	A0748446	Tower Assets Newco X, LLC
1044822	Constructed	A0556219	KENTUCKY, COMMONWEALTH OF DBA = KY EMERGENCY WARNING SYSTEM KEWS
1055079	Constructed	A0482014	Somerset Educational Broadcasting Foundation
1065560	Constructed	A0656673	CUMBERLAND CELLULAR PARTNERSHIP DBA = BLUEGRASS CELLULAR
1215547	Constructed	A0656676	Cumberland Cellular Partnership
1258492	Constructed	A0656689	Cumberland Cellular Partnership
1263985	Constructed	A0656697	Cumberland Cellular Partnership
1273499	Constructed	A0686582	Cumberland Cellular Partnership
1278911	Constructed	A0730983	Cumberland Cellular Partnership
1261655	Constructed	A0656694	Cumberland Cellular Partnership
1042005	Constructed	A0500204	United States Cellular Corporation

Kentucky

MONROE COUNTY



F.S. Land Company
T. Alan Neal Company
Land Surveyors and Consulting Engineers

License Search

Search Results

Specified Search

State = **Kentucky**
 County = **MONROE**
 Radio Service = **CL, CW**
 Status = **Active**

Matches 1- 7 (of 7)

PA = Pending Application(s)
TP = Termination Pending
L = Lease

	Call Sign/Lease ID	Name	FRN	Radio Service	Status	Expiration Date
1	KNKN666	New Cingular Wireless PCS, LLC	0003291192	CL	Active	10/01/2021
2	PA KNKN814	CUMBERLAND CELLULAR PARTNERSHIP d/b/a BLUEGRASS CELLULAR	0001786409	CL	Active	10/01/2020
3	KNLG909	NEW CINGULAR WIRELESS PCS, LLC	0003291192	CW	Active	08/21/2017
4	KNLH402	Powertel Memphis Licenses, Inc.	0001832807	CW	Active	04/28/2017
5	WPOI255	NEW CINGULAR WIRELESS PCS, LLC	0003291192	CW	Active	06/23/2015
6	WPZV473	Bluegrass Wireless LLC	0010698868	CW	Active	06/23/2015
7	WQFA871	New Cingular Wireless PCS, LLC	0003291192	CW	Active	04/28/2017

	Call Sign/Lease ID	Name	FRN	Radio Service	Status	Expiration Date
--	-----------------------------------	-------------	------------	--------------------------	---------------	----------------------------

EXHIBIT E
CO-LOCATION REPORT

10/22/13

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

RE: Alternate Site Analysis Report
Uniform Application for a Communications Facility
Applicant: AT&T Mobility
Site Location: 8721 Center Point Road, Tompkinsville, Kentucky 42167
Site Name: Center Point

Dear Commissioners:

This report is provided to explain the site development process used by the Applicant to identify the site selected for the new wireless communications facility proposed in the accompanying Uniform Application.

AT&T Mobility Site Development Process

Step 1: Problem Identification. AT&T Mobility radio frequency engineers first identified a growing coverage and/or capacity gap in an area of Monroe County east of Tompkinsville, along Center Point Road.

Step 2: Search Ring. To help guide the site development team's task of identifying a suitable location for a new wireless communications facility site, AT&T Mobility's radio frequency engineers identified the geographic area where the antenna site must be located in order to close the gap and issued a map (called a Search Ring) that identified the general area in which a new site must be located. In this instance, the search ring has a .3 mile search radius from the search ring center coordinates (36.727N, -85.57645W). The area is rural and mountainous. There is a ridgeline that runs inside the ring that has high elevations. See attached Exhibit A for an aerial map of the search area.

Step 3: Co-location Review. The site development team first reviewed the area within the Search Ring for a suitable tall structure for co-location. In this case, there are no existing FCC registered structures within the search ring. There are also no existing structures within the search ring that antennas could be attached to that would provide coverage to the area. Please also note that this area has severe terrain issues and any structure would need to be on a high elevation as well as have the additional height to attach antennas to.

Step 4: Review of the Area's Zoning Classification. Once the site development team determined that there are no available existing tall structures which are technically feasible

and suitable for co-location, the team next reviewed local zoning requirements to identify parcels located within the search area that might be suitable from a land use perspective to host an antenna site. In this case, there are no local zoning regulations or classifications. The property, on which the tower and associated easements is proposed, is split into two parcels within Monroe County, KY. The first is 77-17 and the second is 83-17.

Step 5: Preliminary Inspection and Assessment of Suitable Parcels. Once suitably zoned parcels are identified, the site development team visits the parcels and performs a preliminary inspection. The purpose of the preliminary inspection is: (1) to confirm the availability of sufficient land space for the proposed facility; (2) to identify a specific location for the facility on the parcel; (3) to identify any recognized environmental conditions that would disqualify the parcel from consideration; (4) to identify any construction issues that would disqualify the candidate; and, (5) to assess the potential impact of the facility on neighboring properties. In this case, our landlord owned property that had access off of Center Point Road along the ridgeline in the search ring that is near the target coordinates of the search ring. The parcels owned by the landlord and his family contain approximately 84 acres according to the Monroe County PVA records.

Step 6: Candidate Evaluation and Selection. After the preliminary site assessments were performed, the site development team ranked the candidates based on compliance with zoning regulations, the availability of ground space, topography, applicable environmental conditions, construction feasibility and the potential impact of the facility on neighboring properties. In this case, due to the ground elevation, the size of the parcels owned by this family, a large area that was already cleared of trees, and the existing access road with power lines, this was the ideal candidate.

Step 7: Leasing and Due Diligence. Once a suitable candidate was selected, lease negotiations were commenced and site due diligence steps were performed, as described below.

Leasehold Due Diligence:

- A Title Report was obtained and reviewed to ensure that there are no limitations on the landowner's capacity to lease and to address any title issues.
- A site survey was obtained to identify the location of parcel features, boundaries, easements and other encumbrances revealed by the title search.

Engineering Due Diligence:

- Utility access identified.
- Grounding plan designed.
- Geotechnical soil analysis performed to determine foundation requirements.
- Foundations designed to meet the Kentucky Building Code lateral and subjacent support requirements.
- Site plan developed.

Environmental Due Diligence:

A Phase I Environmental Site Assessment (“ESA”) investigation was performed to establish the pre-existing types and amounts of contamination at a site, and to establish that the leaseholder is innocent of liability for the costs of performing environmental cleanup work that might arise from pollution or contamination of the site caused by a third party.

In addition to performing a Phase 1 ESA, the site was also evaluated for potential impacts under the National Environmental Policy Act (NEPA), submitted to the State Historic Preservation Office for review of potential impacts to historic structures or districts, and submitted to the registered Tribal Historic Preservation Office so that registered Native American nations had the opportunity to review potential impacts on native religious, ceremonial, or cultural resources.

Federal Regulatory Approvals

- Federal Aviation Administration (“FAA”) compliance.
- Federal Communications Commission (“FCC”) compliance.

In this case, no properties were ruled out due to the criteria above.

Step 8: Application. Once a lease is obtained and all site due diligence is completed, AT&T Mobility prepared and filed the accompanying uniform application to construct, maintain and operate a communications facility.

Conclusion

Applicant’s site identification and selection process aims to identify the least intrusive of all the technically feasible parcels in a service need area. In this case, this property had the required elevation, existing access within the property itself, an area already cleared of trees, and an existing power line. This landowner was interested in having the tower built on his property. There is natural screening due to the amount of forest on his property and the size of his parcel.

Sincerely,



Paul Reinhardt
Site Acquisition Agent
PBM Wireless Services
13714 Smokey Ridge Overlook
Carmel, Indiana 46033
(678) 446-6491

Exhibit A

Aerial Map

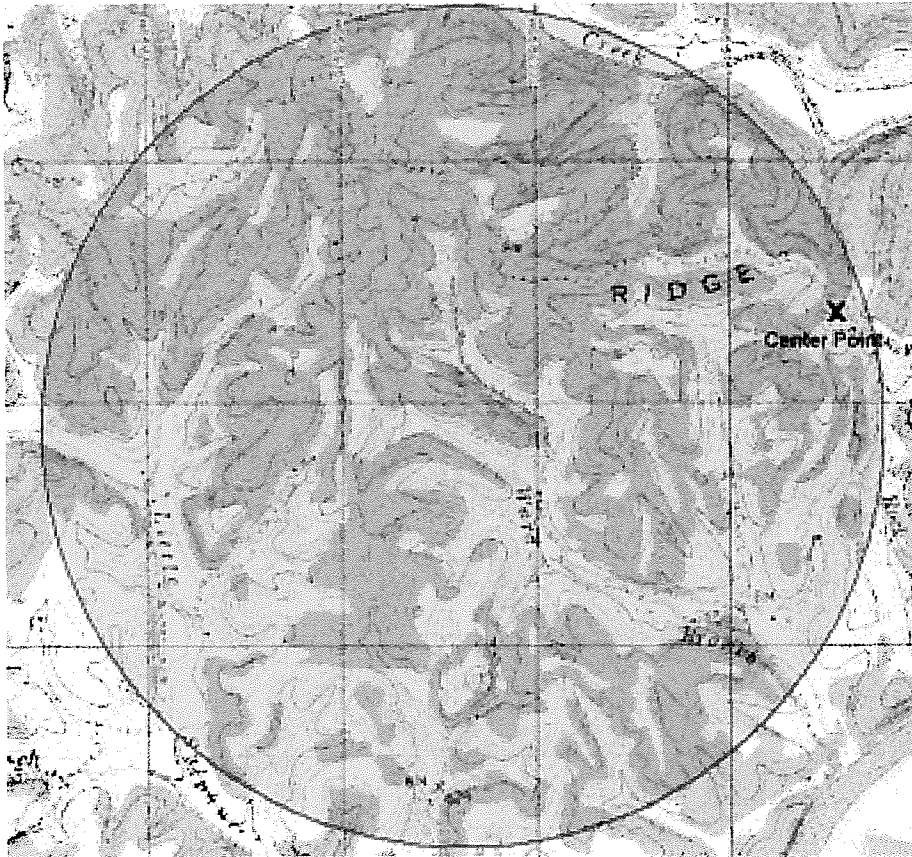


Exhibit B

Zoning Map

N/A – No local zoning

EXHIBIT C

Topographical Map

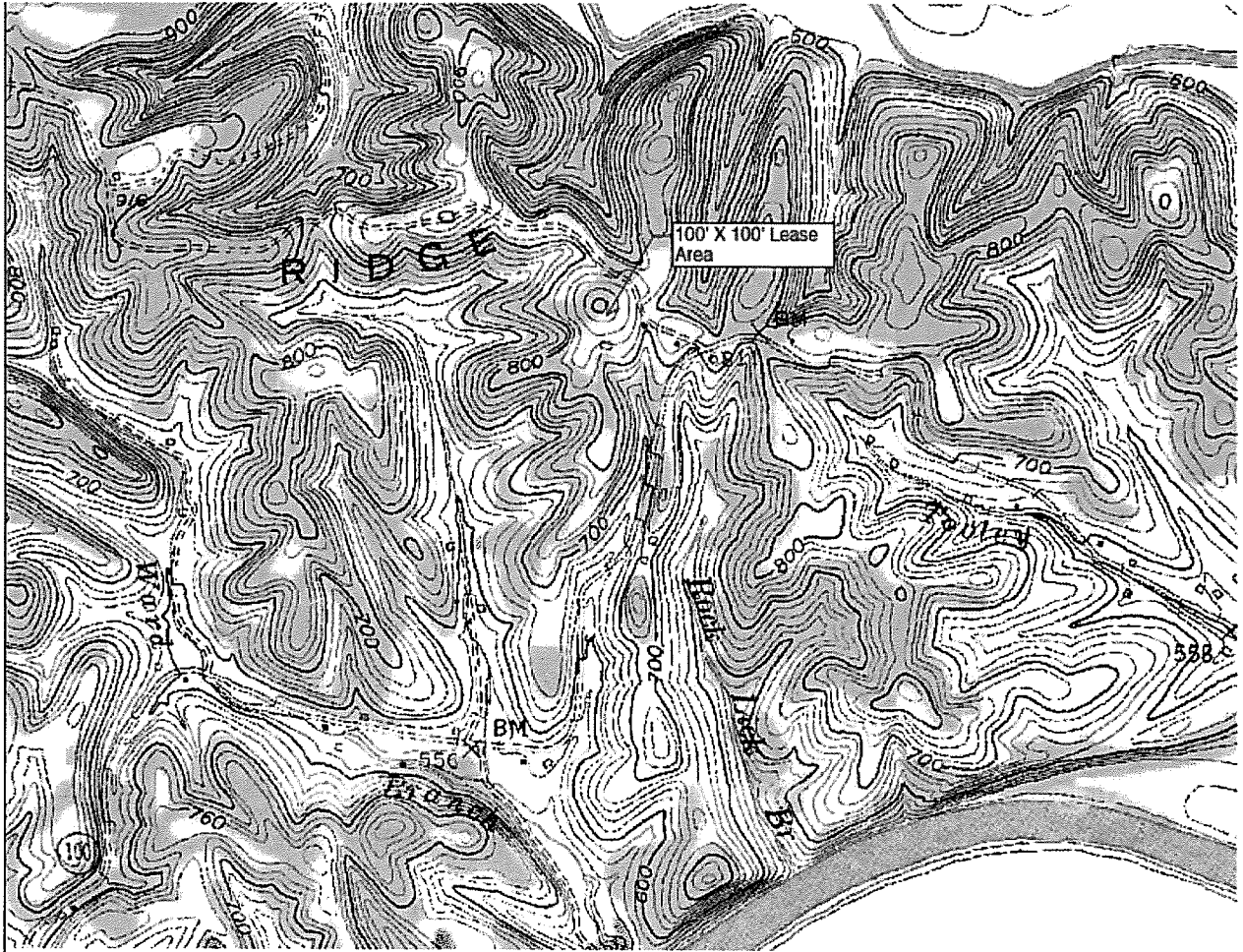


EXHIBIT F
FAA



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
2601 Meacham Boulevard
Fort Worth, TX 76137

Aeronautical Study No.
2013-ASO-7431-OE

Issued Date: 11/15/2013

FAA / FCC Department
American Towers, LLC
10 Presidential Way
Woburn, MA 01801

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

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

Structure: Antenna Tower CENTER POINT KY (281329)
Location: TOMPKINSVILLE, KY
Latitude: 36-43-41.33N NAD 83
Longitude: 85-34-13.59W
Heights: 876 feet site elevation (SE)
199 feet above ground level (AGL)
1075 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:

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

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

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 05/15/2015 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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

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

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

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

If we can be of further assistance, please contact our office at (847) 294-8084. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2013-ASO-7431-OE.

Signature Control No: 196855545-201893552

(DNE)

Carole Bernacchi
Technician

Attachment(s)
Frequency Data

cc: FCC

Frequency Data for ASN 2013-ASO-7431-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

EXHIBIT G
KENTUCKY AIRPORT ZONING COMMISSION



KENTUCKY AIRPORT ZONING COMMISSION

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

602 KAR 50:030

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

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

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

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

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

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

INSTRUCTIONS

1. "Alteration" means to increase or decrease the height of a structure or change the obstruction marking and lighting.
2. "Applicant" means the person who will own or have control over the completed structure.
3. "Certification by Applicant" shall be made by the individual who will own or control the completed structure; or a partner in a partnership; or the president or authorized officer of a corporation company, or association; or the authorized official of a body politic; or the legally designated representative of a trustee, receiver, or assignee.
4. Prepare the application and forward to the administrator, Kentucky Airport Zoning Commission, Department of Aviation, 90 Airport Rd., Building 400, Frankfort, KY 40601. For questions, telephone 502-564-4480.
5. The statutes applicable to the Kentucky Airport Commission are KRS 183.861 to 183.990 and the administrative regulations are 602 KAR Chapter 50.

6. When applicable, attaché the following appendices to the application:

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

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

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

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

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

PENALTIES

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



KENTUCKY AIRPORT ZONING COMMISSION

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

APPLICANT (name) American Towers, Inc		PHONE (781) 926-7126	FAX	KY AERONAUTICAL STUDY #	
ADDRESS (street) 10 Presidential Way		CITY Woburn		STATE MA	ZIP 01801
APPLICANT'S REPRESENTATIVE (name)		PHONE	FAX		
ADDRESS (street)		CITY		STATE	ZIP
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE	
DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days)				Start End	
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building		MARKING/PAINTING/LIGHTING PREFERRED			
<input checked="" type="checkbox"/> Antenna Tower		<input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity			
<input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank		<input type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white			
<input type="checkbox"/> Landfill <input type="checkbox"/> Other		<input checked="" type="checkbox"/> Other NONE			
LATITUDE 36°43'41.33"		LONGITUDE 85°34'13.59"		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other	
NEAREST KENTUCKY City TOMPKINSVILLE County Monroe		NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT			
SITE ELEVATION (AMSL, feet) 876		TOTAL STRUCTURE HEIGHT (AGL, feet) 199		CURRENT (FAA aeronautical study #) 2013-ASO-7431-OE	
OVERALL HEIGHT (site elevation plus total structure height, feet) 1075				PREVIOUS (FAA aeronautical study #)	
DISTANCE (from nearest Kentucky public use or Military airport to structure)				PREVIOUS (KY aeronautical study #)	
DIRECTION (from nearest Kentucky public use or Military airport to structure)					
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) Please see map					
DESCRIPTION OF PROPOSAL Proposed tower					
FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when? 08/26/2013					
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)					
PENALTIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)					
NAME Katie Miller	TITLE Compliance	SIGNATURE Katie Miller		DATE 08/26/2013	
COMMISSION ACTION <input type="checkbox"/> Chairperson, KAZC <input type="checkbox"/> Administrator, KAZC					
<input type="checkbox"/> Approved		SIGNATURE		DATE	
<input type="checkbox"/> Disapproved					

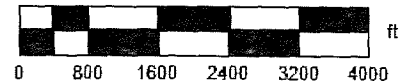
Digitally signed by Katie Miller
DN: cn=Katie Miller o=American
Towers, Inc. ou=FAA/ACC Compliance,
email=katie.miller@americanpower.co
m.c.05
Date: 2013.08.26 12:02:25 -0400



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Data Zoom 13-0

From: Houlihan, John (KYTC) [mailto:John.Houlihan@ky.gov]
Sent: Tuesday, August 27, 2013 8:27 AM
To: Katie Miller
Subject: RE: ATC Proposed Tower # 281329
Importance: Low

The above subject does not require a permit from the Kentucky Airport Zoning Commission. The antenna does not exceed any of the following criteria:
602 KAR 50:030. Jurisdiction of the Kentucky Airport Zoning Commission.

RELATES TO: KRS 183.861, 183.865, 183.867, 183.870

STATUTORY AUTHORITY: KRS 183.861

NECESSITY, FUNCTION, AND CONFORMITY: KRS 183.867 specifies that the commission has jurisdiction over zoning for all public use and military airports. This administrative regulation defines the areas over which the Kentucky Airport Zoning Commission has jurisdiction for the purpose of zoning in accordance with KRS Chapter 183 and specifics when the owner or person who has control over a structure which encroaches on the jurisdiction of the Kentucky Airport Zoning Commission shall apply for a permit.

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

(1) 100 to one (1) for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each public use and military airport with at least one (1) runway 3,200 feet or more in length; or

(2) Fifty (50) to one (1) for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each public use and military airport with its longest runway less than 3,200 feet in actual length.

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

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

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

Section 5. The owner or person who has control over a structure which penetrates or will penetrate the airspace over which the commission has jurisdiction shall apply for a permit from the commission in accordance with 602 KAR 50:090. (KAV-9-1; 1 Ky.R. 807; eff. 5-14-75; Am. 2 Ky.R. 306; eff. 3-10-76; 5 Ky.R. 599; eff. 3-7-79; 10 Ky.R. 445; eff. 1-4-84; 14 Ky.R. 267; eff. 9-10-87; 19 Ky.R. 800; eff. 11-4-92; 27 Ky.R. 2228; 2774; eff. 4-9-2001.)

Please keep this email for your records. Thank you.

Kentucky Airport Zoning Commission (KAZC)
John Houlihan, Administrator
90 Airport Road, Building 400
Frankfort, KY 40601
Direct Line 502-564-0310, Cell 502-330-3955, Office 502-564-4480, Fax 502-564-7953

KAZC webpage: <http://transportation.ky.gov/Aviation/Pages/Zoning-Commission.aspx>

CONFIDENTIALITY NOTICE: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail or call (502) 564-0310 and destroy all copies of the original message.

From: Katie Miller [mailto:Katie.Miller@AmericanTower.com]
Sent: Monday, August 26, 2013 12:08 PM

To: Houlihan, John (KYTC)
Subject: ATC Proposed Tower # 281329

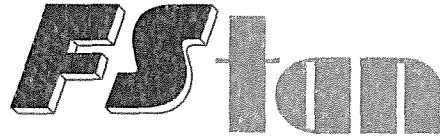
Please see attached KAZC Application, copy of FAA 7460-1, and map for ATC proposed tower # 281329.

Thank you,

Katie Miller
Regulatory Compliance Coordinator – FAA/FCC
American Tower Corporation
10 Presidential Way
Woburn, MA 01801
office: 781.926.7126
katie.miller@americantower.com

We're excited to announce our new FAA-FCC@americantower.com email account. Please use this centralized address going forward as your one-stop shop for all questions and requests related to FAA and FCC filings. The FAA/FCC team monitors this daily and will be happy to assist you.

EXHIBIT H
GEOTECHNICAL REPORT



Land Surveyors & Consulting Engineers

GEOTECHNICAL ANALYSIS STUDY

Proposed Center Point Tower
N36° 43' 41.33" W85° 34' 13.59"
8721 Center Point Road,
Tompkinsville, Monroe County, Kentucky
FStan Project No. 13-8641; AT&T NSB No. 144243; ATC No. 281329

**FStan Land Surveyors &
Consulting Engineers
426 East Warnock Street
Louisville, KY 40217
Phone: (502) 636-5111
Fax: (502) 636-5263**

Prepared For:

**Ms. Melissa Brofford
American Tower Corporation
10 Presidential Way
Woburn, MA 01801**

**Date: September 13, 2013
Revised: December 17, 2013**



Land Surveyors and Consulting Engineers
Formerly F.S. Land & T. Alan Neal Companies

September 13, 2013

Ms. Melissa Brofford
American Tower Corporation
10 Presidential Way
Woburn, MA 01801

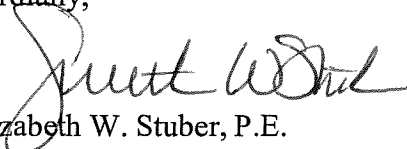
Re: Geotechnical Engineering Study
Proposed 195-foot Monopole Tower with 4 foot Lightning Arrestor
American Tower Corporation Site Name: Center Point
N36° 43' 41.33" W85° 34' 13.59"
8721 Center Point Road, Tompkinsville, Monroe County, Kentucky
FStan Project No: 13-8641 AT&T NSB No: 144243 ATC No: 281329

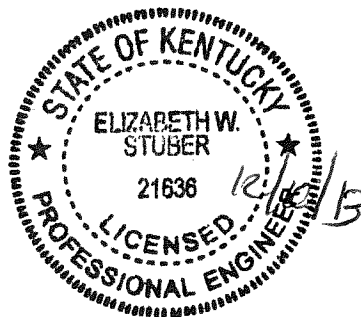
Dear Ms. Brofford:

Transmitted herewith is our geotechnical engineering report for the referenced project. This report contains our findings, an engineering interpretation of these findings with respect to the available project characteristics, and recommendations to aid design and construction of the tower foundations.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding this report, please contact our office.

Cordially,


Elizabeth W. Stuber, P.E.
Geotechnical Engineer
Kentucky License No.: 21636



Copies submitted: (3) Ms. Melissa Brofford

LETTER OF TRANSMITTAL

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APPENDIX

BORING LOCATION PLAN
GEOTECHNICAL BORING LOG
SOIL SAMPLE CLASSIFICATION

GEOTECHNICAL ENGINEERING INVESTIGATION
Proposed 195-foot Monopole Tower with 4 foot Lightning Arrestor
American Tower Corporation Site Name: Center Point
N36° 43' 41.33" W85° 34' 13.59"
8721 Center Point Road, Tompkinsville, Monroe County, Kentucky
FStan Project No: 13-8641 AT&T NSB No: 144243 ATC No: 281329

1. PURPOSE AND SCOPE

The purpose of this study was to determine the general subsurface conditions at the site of the proposed tower by drilling two soil test borings and to evaluate this data with respect to foundation concept and design for the proposed tower. Also included is an evaluation of the site with respect to potential construction problems and recommendations dealing with quality control during construction.

2. PROJECT CHARACTERISTICS

American Tower Corporation is proposing to construct a 195 feet tall monopole communications tower with a 4 foot lightning arrestor on property owned by Johnny Graves, et al, located at N36° 43' 41.33"/W85° 34' 13.59", 8721 Center Point Road, Tompkinsville, Monroe County, Kentucky. The proposed lease area will be 100 feet x 100 feet with an access road from the site southeast to Center Point Road. The site is located on a hillside of a very large parent parcel. The topographical site relief within the lease area is about 20 feet. The elevation of the site is approximately 876 feet msl. Surface water runoff is directed by the topography toward the east. A detailed evaluation of long-term slope stability was beyond the scope of this study. The proposed tower location is shown on the Boring Location Plan in the Appendix.

Preliminary information provided us indicates that this project will consist of constructing a monopole communications tower 195 feet tall with a 4 foot lightning arrestor. We have assumed the following structural information:

- Compression = 400 kips
- Uplift = 300 kips
- Total shear = 40 kips

The development will also include a small equipment shelter near the base of the tower. The wall and floor loads for the shelter are assumed to be less than 4 kip/ln.ft. and 200 lbs/sq.ft., respectively.

The Monroe County area of Kentucky is known to be very karst with sinkhole, joints and an uneven bedrock surface. However, only a few sinkholes were noted on the 7.5-minute topographic map and none within one-half mile of the site.

3. SUBSURFACE CONDITIONS

The subsurface conditions were explored by drilling two test borings at the base of the proposed tower that was staked in the field by the project surveyor. The Geotechnical Soil Test Boring Logs, which are included in the Appendix, describes the materials and conditions encountered. A sheet defining the terms and symbols used on the boring log is also included in the Appendix. The general subsurface conditions disclosed by the test borings are discussed in the following paragraphs.

About 4 inches of topsoil was encountered at the existing ground surface. Below the topsoil, the borings encountered clay (CH) of high plasticity to auger refusal at about 5 feet. The SPT N-values in the clayey soils ranged from 42 to more than 50 blows per foot indicating a hard consistency. Auger refusal is defined as the depth at which the boring can no longer be advanced using the current drilling method.

The refusal material was cored from 5 to 25 feet below the ground surface in Boring 1. Limestone that was soft to moderately hard, weathered to slightly weathered, light gray with a few thin mud seams at about 11 feet when a mud seam was encountered at about 23 feet. Limestone similar to the limestone above was cored from 23 to 25 feet. The borehole caved and the core barrel could not be returned to the borehole. The recovery of the upper rock core was 68 percent and the RQD value

was 0 percent. These values generally represent very poor to fair quality rock from a foundation support viewpoint.

Observations made at the completion of soil drilling operations indicated the borings to be dry. It must be noted, however, that short-term water readings in test borings are not necessarily a reliable indication of the actual groundwater level. Furthermore, it must be emphasized that the groundwater level is not stationary, but will fluctuate seasonally. However, the void will greatly effect how well the rock will perform.

Based on the limited subsurface conditions encountered at the site and using Table 1615.1.1 of the 2002 Kentucky Building Code, the site class is considered "C". Seismic design requirements for telecommunication towers are given in section 1622 of the code. A detailed seismic study was beyond the scope of this report.

4. FOUNDATION DESIGN RECOMMENDATIONS

The following design recommendations are based on the previously described project information, the subsurface conditions encountered in our borings, the results of our laboratory testing, empirical correlations for the soil types encountered, our analyses, and our experience. If there is any change in the project criteria or structure location, you should retain us to review our recommendations so that we can determine if any modifications are required. The findings of such a review can then be presented in a supplemental report or addendum.

We recommend FStan be retained to review the near-final project plans and specifications, pertaining to the geotechnical aspects of the project, prior to bidding and construction. We recommend this review to check that our assumptions and evaluations are appropriate based on the current project information provided to us, and to check that our foundation and earthwork recommendations were properly interpreted and implemented.

4.1 Tower

Our findings indicate that the proposed monopole tower can be supported on drilled piers or on a common mat foundation. However, a mat foundation is strongly recommended over a drilled pier due to the thick mud seams encountered.

4.1.1. Drilled Piers

A drilled pier that bear in the limestone bedrock below a depth of about 5 feet but no deeper than 8 feet can be designed for a net allowable end bearing pressure of 10,000 pounds per square foot (psf). The following table summarizes the recommended values for use in analyzing lateral and frictional resistance for the various strata encountered at the test boring. It is important to note that these values are estimated based on the standard penetration test results and soil types, and were not directly measured. The values provided for undrained shear strength and total unit weight are ultimate values and appropriate factors of safety should be used in conjunction with these values.

Depth Below Ground Surface, feet	Undrained Shear Strength, psf	Angle of Internal Friction, Ø, degrees	Total Unit Weight, pcf	Allowable Passive Soil Pressure, psf/one foot of depth	Allowable Side Friction, psf
0 - 5	3,000	0	120	2,000 + 40D	200
5 - 8	5,000	0	135	3,000 + 45(D-5)	1500

Note: D = Depth below ground surface (in feet) to point at which the passive pressure is calculated.

It is important that the drilled pier be installed by an experienced, competent drilled pier contractor who will be responsible for properly installing the piers in accordance with industry standards and generally accepted methods, without causing deterioration of the subgrade. The recommendations contained herein relate only to the soil-pier interaction and do not account for the structural design of the piers.

4.1.2. Mat Foundation

As an alternative, the tower could be supported on a common mat foundation bearing at a depth of at least 3 feet in the clay soil. A net allowable bearing pressure of up to 6,000 pounds per square foot may be used. These values may be increased by 30 percent for the maximum edge pressure under transient loads. A friction value of 0.30 may be used between the concrete and the underlying clay soil. The passive pressures given for the drilled pier foundation may be used to resist lateral forces.

It is important that the mat be designed with an adequate factor of safety with regard to overturning under the maximum design wind load.

4.2. Equipment Building

The equipment building may be supported on shallow spread footings bearing in the shallow clay and designed for a net allowable soil pressure of 3,500 pounds per square foot. The footings should be at least ten inches wide. If the footings bear on soil they should bear at a depth of at least 36 inches to minimize the effects of frost action. All existing topsoil or soft natural soil should be removed beneath footings.

The floor slab for the new equipment building may be subgrade supported on a properly prepared subgrade. The slab should be designed and adequately reinforced to resist the loads proposed. The exposed subgrade should be carefully inspected by probing and testing as needed. Any organic material still in place, frozen or excessively soft soil and other undesirable materials should be removed.

Once the subgrade has been properly prepared and evaluated, fill may be placed to attain the desired final grade. Any non-organic, naturally occurring, non-expansive soils can be used for structural fill, including those encountered on this site, pending evaluation by the geotechnical engineer.

All engineered fill should be compacted to a dry density of at least 98 percent of the standard Proctor maximum dry density (ASTM D698). The compaction should be accomplished by placing the fill in about eight inch loose lifts and mechanically compacting each lift to at least the specified density. Field tests should be performed on each lift as necessary to insure that adequate compaction is being achieved.

4.3. Drainage and Groundwater Considerations

Good site drainage must be provided. Surface run-off water should be drained away from the shelter building and not allowed to pond. It is recommended that all foundation concrete be placed the same day the excavation is made.

At the time of this investigation, groundwater was not encountered. Therefore, no special provisions regarding groundwater control are considered necessary for the proposed structures.

5. GENERAL CONSTRUCTION PROCEDURES AND RECOMMENDATIONS

It is possible that variations in subsurface conditions will be encountered during construction. Although only minor variations that can be readily evaluated and adjusted for during construction are anticipated, it is recommended the geotechnical engineer or a qualified representative be retained to perform continuous inspection and review during construction of the soils-related phases of the work. This will permit correlation between the test boring data and the actual soil conditions encountered during construction.

5.1. Foundation Excavation Inspection

5.1.1 Drilled Piers

The following recommendations are recommended for drilled pier construction:

- Clean the foundation bearing area so it is nearly level or suitably benched and is free of ponded water or loose material.

- Make provisions for ground water removal from the drilled shaft excavation. While the borings were dry prior to rock coring and significant seepage is not anticipated, the drilled pier contractor should have pumps on hand to remove water in the event seepage into the drilled pier is encountered.
- Specify concrete slumps ranging from 4 to 7 inches for the drilled shaft construction. These slumps are recommended to fill irregularities along the sides and bottom of the drilled hole, displace water as it is placed, and permit placement of reinforcing cages into the fluid concrete.
- Retain the geotechnical engineer to observe foundation excavations after the bottom of the hole is leveled, cleaned of any mud or extraneous material, and dewatered.
- Install a temporary protective steel casing to prevent sidewall collapse, prevent excessive mud and water intrusion, and to allow workers to safely enter, clean and inspect the drilled shaft.
- A five foot probe hole must be drilled in the bottom of the shaft to inspect for mud seams. If a mud seam greater than ½ inch is encountered within the first 3 feet, an additional 3 feet of rock should be drilled. If a mud seam greater than 1 inch is encountered within the first 5 feet, an additional 3 feet of rock should be drilled.
- Clean the socket "face" prior to concrete placements. Cleaning will require hand cleaning or washing if a mud smear forms on the face of the rock. The geotechnical engineer should approve the rock socket surface prior to concrete placement.
- The protective steel casing may be extracted as the concrete is placed provided a sufficient head of concrete is maintained inside the steel casing to prevent soil or water intrusion into the newly placed concrete.
- Direct the concrete placement into the drilled hole through a centering chute to reduce side flow or segregation.

5.2 Fill Compaction

All engineered fill placed adjacent to and above the tower foundation should be compacted to a dry density of at least 95 percent of the standard Proctor maximum dry density (ASTM D-698). This minimum compaction requirement should be increased to 98 percent for any fill placed below the tower foundation bearing elevation. Any fill placed beneath the tower foundation should be limited to well-graded sand and gravel or crushed stone. The compaction should be accomplished by placing the fill in about 8 inch (or less) loose lifts and mechanically compacting each lift to at least the specified minimum dry density. Field density tests should be performed on each lift as necessary to insure that adequate moisture conditioning and compaction is being achieved.

Compaction by flooding is not considered acceptable. This method will generally not achieve the desired compaction and the large quantities of water will tend to soften the foundation soils.

5.3 Construction Dewatering

Groundwater may be encountered during drilled pier excavation. It is anticipated that any such seepage can be handled by conventional dewatering methods such as pumping from sumps. Dewatering of drilled pier excavations that extend below the groundwater level may be more difficult since pumping directly from the excavations could cause a deterioration of the bottom of the excavation. If the pier excavations are not dewatered, concrete should be placed by the tremie method.

6 FIELD INVESTIGATION

Two soil test borings were drilled based on the tower center location established in the field by the project surveyor. Split-spoon samples were obtained by the Standard Penetration Test (SPT)

procedure (ASTM D1586) in the test boring. The boring encountered auger refusal at 5 feet below the existing ground surface. A sample of the refusal material was cored in Boring 1 from 5 to 25 feet below the ground surface. The split-spoon samples were inspected and visually classified by a geotechnical engineer. Representative portions of the soil samples were sealed in glass jars and returned to our laboratory.

The boring logs are included in the Appendix along with a sheet defining the terms and symbols used on the logs and an explanation of the Standard Penetration Test (SPT) procedure. The logs present visual descriptions of the soil strata encountered, Unified System soil classifications, groundwater observations, sampling information, laboratory test results, and other pertinent field data and observations.

7 WARRANTY AND LIMITATIONS OF STUDY

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either express or implied. FStan is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

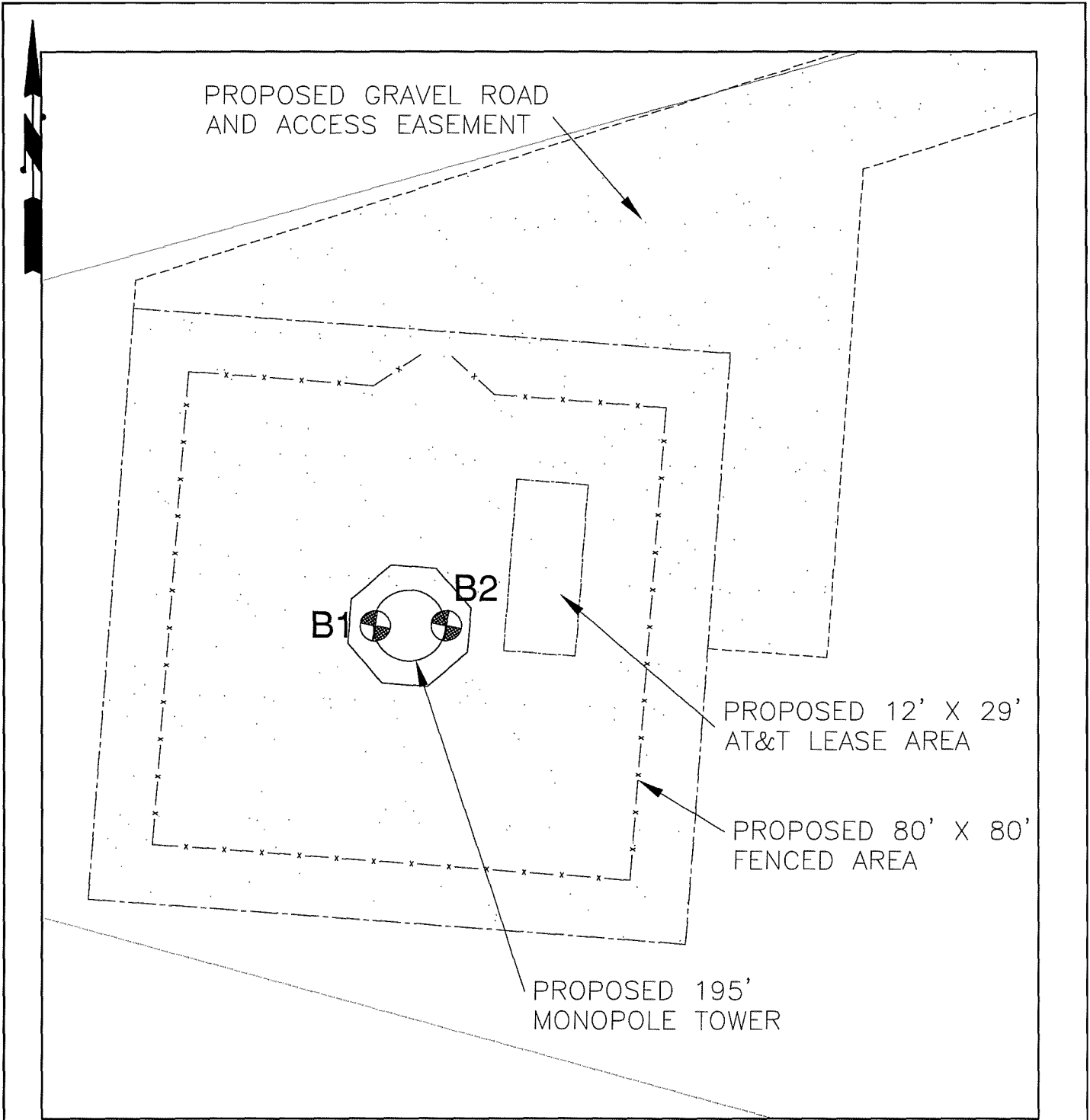
A geotechnical study is inherently limited since the engineering recommendations are developed from information obtained from test borings, which depict subsurface conditions only at the specific locations, times and depths shown on the log. Soil conditions at other locations may differ from those encountered in the test borings, and the passage of time may cause the soil conditions to change from those described in this report.

The nature and extent of variation and change in the subsurface conditions at the site may not become evident until the course of construction. Construction monitoring by the geotechnical engineer or a representative is therefore considered necessary to verify the subsurface conditions

and to check that the soils connected construction phases are properly completed. If significant variations or changes are in evidence, it may then be necessary to reevaluate the recommendations of this report. Furthermore, if the project characteristics are altered significantly from those discussed in this report, if the project information contained in this report is incorrect, or if additional information becomes available, a review must be made by this office to determine if any modification in the recommendations will be required.

APPENDIX

BORING LOCATION PLAN
GEOTECHNICAL BORING LOG
SOIL SAMPLE CLASSIFICATION



• BORING LOCATION

BORING LOCATION PLAN

**SITE NAME: CENTER POINT
 PROPOSED 195' MONOPOLE TOWER
 WITH 4' LIGHTING ARRESTOR**

NOT TO SCALE

FSTAN PROJECT #:
13-8641

DATE:
09-13-13



**Formerly F.S. Land &
 T. Alan Neal Company**
 Land Surveyors and Consulting Engineers
 2540 Ridgemoor Court, Suite 102
 Louisville, KY 40299
 Phone: (502) 636-5868 (502) 636-5111
 Fax: (502) 636-5263



F.S. Tan Land Consulting Engineers
 P.O. Box 17546
 Louisville, KY 40217
 502-636-5111
 502-636-5263

Geotechnical Boring Log

Boring No: **B-1**

Client: American Tower Corporation	Project Number: 13-8641
Project: Proposed Center Point Tower	Drilling Firm: Hoosier Drilling
Location: N36° 43' 41.33" / W85° 34' 13.59"	Project Manager: Beth Stuber
Date Started: 9/6/2013	Total Depth of Boring: 25 ft
Date Completed: 9/6/2013	NA on rods
Boring Method: HSA-Manual Hammer	DRY at completion
Surface Elevation: NA	NA NA hours after completion

Layer Depth ft	Legend	Material Description	Depth Scale ft	Sample Data						Remarks
				No.	Type	Blows	Rec. %	PP tsf	W %	
0.0 - 5.0		CLAY (CH) with Clayshale - hard, brown-tan-light gray mottled	0.0 - 5.0	1	SS	15-21-26	67			About 4 inches of topsoil were encountered at the existing ground surface.
5.0 - 11.0		LIMESTONE - weathered to slightly weathered, soft to moderately hard. light gray with thin mud seams	5.0 - 11.0	2	SS	20-27-32	67			
11.0 - 23.0		MUD SEAM	11.0 - 23.0	3	RC		68			
23.0 - 25.0		LIMESTONE - weathered to slightly weathered, soft to moderately hard. reddish brown with thin mud seams	23.0 - 25.0	4	RC					
25.0 - 30.0		Bottom of Boring at 25 ft	25.0 - 30.0	5	RC					
30.0 - 35.0		Bottom of Boring at 25 ft	30.0 - 35.0	6	RC					

GEOTECHNICAL BORING LOG 13-8641.GPJ FSTAN.GDT 12/17/13



F.S. Tan Land Consulting Engineers
 P.O. Box 17546
 Louisville, KY 40217
 502-636-5111
 502-636-5263

Geotechnical Boring Log

Boring No: **B-2**

Client: American Tower Corporation	Project Number: 13-8641
Project: Proposed Center Point Tower	Drilling Firm: Hoosier Drilling
Location: N36° 43' 41.33" / W85° 34' 13.59"	Project Manager: Beth Stuber
Date Started: 9/6/2013	Total Depth of Boring: 5 ft
Date Completed: 9/6/2013	NA on rods
Boring Method: HSA-Manual Hammer	DRY at completion
Surface Elevation: NA	NA NA hours after completion

Layer Depth ft	Legend	Material Description	Depth Scale ft	Sample Data					Remarks
				No.	Type	Blows	Rec. %	PP tsf	
5.0		CLAY (CH) with Clayshale - hard, reddish brown		1	SS	15-20-22	33		About 4 inches of topsoil were encountered at the existing ground surface.
			2	SS	18-50	33			
		Bottom of Boring at 5 ft	5						
			10						
			15						
			20						
			25						
			30						

GEOTECHNICAL BORING LOG 13-8641.GPJ FSTAN.GDT 12/17/13

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPH	LETTER		
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES	
		CLAYEY SANDS, SAND - CLAY MIXTURES		SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
		SILTS AND CLAYS LIQUID LIMIT LESS THAN 50	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
			SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS		MH
INORGANIC CLAYS OF HIGH PLASTICITY				CH	INORGANIC CLAYS OF HIGH PLASTICITY	
ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS		OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS		
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

EXHIBIT I
DIRECTIONS TO WCF SITE

Driving Directions to Proposed Tower Site at Center Point

1. Beginning at the Monroe County Clerk's office, located at 200 North Main Street, Tompkinsville, KY 42167, head northeast on North Main Street towards 4th street.
2. Turn right onto E. 4th Street and travel approximately 325 feet.
3. Turn left onto N. Magnolia Street and travel approximately 0.8 miles.
4. Continue onto KY-100E/Center Point Road and travel for approximately 8.1 miles.
5. Destination is on the left.
6. The site coordinates are
 - a. North 36 deg 43' 41.33
 - b. West 85 deg 34' 13.59



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

EXHIBIT J
COPY OF REAL ESTATE AGREEMENT

Site Name: Center Point
Site Number: 281329

LEASE AGREEMENT

THIS LEASE AGREEMENT ("*Agreement*") is made effective as of the date of the latter signature hereof (the "*Execution Date*") and is by and between Landlord and American Tower.

RECITALS

- A. WHEREAS, Landlord is the owner of that certain parcel of land (the "*Property*") located in the County of Monroe, State of Kentucky, as more particularly described on Exhibit A;
- B. WHEREAS, Landlord desires to grant to American Tower an option to lease from Landlord a portion of the Property (the "*Compound*"), together with easements for ingress and egress and the installation and maintenance of utilities (the "*Easement*") and together with the Compound, the "*Site*") both being approximately located as shown on Exhibit B; and

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, and other good and valuable consideration, the receipt, adequacy and sufficiency of all of which are hereby acknowledged, the parties hereto hereby agree as follows:

1. **Business and Defined Terms.** For the purposes of this Agreement, the following capitalized terms have the meanings set forth in this paragraph 1.

(a) ***American Tower:*** American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers LLC

(b) ***Notice Address of American Tower:*** American Towers LLC
c/o American Tower Corporation
10 Presidential Way
Woburn, MA 01810
Attn: Land Management

with a copy to: American Towers LLC
c/o American Tower Corporation
116 Huntington Ave.
Boston, MA 02116
Attn: Law Department

(c) ***Landlord:*** Johnny Graves and his wife Glaydell Graves

Johnny Graves and his wife Glaydell Graves, as to a 1/3 undivided interest, Johnny Wayne Graves, Jr., as to a 1/3 undivided interest, and David Graves, as to a 1/3 undivided interest

(d) ***Notice Address of Landlord:*** Johnny Graves
8475 Center Point Road
Tompkinsville, KY 42167

Site Name: Center Point
Site Number: 281329

- (e) **Initial Option Period:** One (1) year
- (f) **Renewal Option Period(s):** One (1) periods of One (1) year each.
- (g) **Option Period:** The Initial Option Period and any Renewal Option Period(s)
- (h) **Option Consideration (Initial Option Period):** [REDACTED]
- (i) **Option Extension Consideration (Renewal Option Period(s)):** [REDACTED]
- (j) **Commencement Date:** The date specified in the written notice by American Tower to Landlord exercising the Option constitutes the Commencement Date of the Term.
- (k) **Initial Term:** Five years, commencing on the Commencement Date and continuing until midnight of the day immediately prior to the fifth anniversary of the Commencement Date.
- (l) **Renewal Terms:** Each of the Five (5) successive periods of five years each, with the first Renewal Term commencing upon the expiration of the Initial Term and each subsequent Renewal Term commencing upon the expiration of the immediately preceding Renewal Term.
- (m) **Term:** The Initial Term with any and all Renewal Terms
- (n) **Rent:** The monthly amount of [REDACTED]
- (o) **Increase Amount:** Rent will increase at the commencement of each Renewal Term by an amount equal to [REDACTED] for the previous five year period.
- (p) **Increase Date:** The first date of each Renewal Term.

2. **Option to Lease.**

- (a) **Grant of Option.** Landlord hereby gives and grants to American Tower and its assigns, an exclusive and irrevocable option to lease the Site during the Initial Option Period (the "**Option**").
- (b) **Extension of Option.** The Initial Option Period will automatically be extended for each Renewal Option Period unless American Tower provides Landlord written notice of its intent not to extend the Option.
- (c) **Consideration for Option.** Option Consideration is due and payable in full within 30 days of the Execution Date and American Tower will pay Landlord any Option Extension Consideration within 30 days of the commencement of any Renewal Option Period.
- (d) **Option Period Inspections and Investigations.**
 - (i) During the Option Period, Landlord will provide American Tower with any keys or access codes necessary for access to the Property.
 - (ii) During the Option Period, American Tower and its officers, agents, employees and independent contractors may enter upon the Property to perform or cause to be performed test borings of the soil, environmental audits, engineering studies and to conduct a metes and bounds survey of the Site and/or the Property (the "**Survey**"), provided that American Tower will not

Site Name: Center Point

Site Number: 281329

unreasonably interfere with Landlord's use of the Property in conducting these activities. At American Tower's discretion, the legal description of the Site as shown on the Survey may replace Exhibit B of this Agreement and be added as Exhibit B of the Memorandum of Lease.

(iii) American Tower may not begin any construction activities on the Site during the Option Period other than those activities described in, or related to, this paragraph 2(d).

(e) Exercise of Option. American Tower may, in its sole discretion, exercise the Option by delivery of written notice to Landlord at any time during the Option Period. If American Tower exercises the Option then Landlord will lease the Site to American Tower subject to the terms and conditions of this Agreement. If American Tower does not exercise the Option, this Agreement will terminate.

3. Term.

(a) Initial Term. The Initial Term is as provided in paragraph 1(k).

(b) Renewal Terms. American Tower will have the right to extend this Agreement for each of the Renewal Terms. Each Renewal Term will be on the same terms and conditions provided in this Agreement except that Rent will escalate as provided in paragraph 4(b). This Agreement will automatically be renewed for each successive Renewal Term unless American Tower notifies Landlord in writing of American Tower's intention not to renew the Agreement at any time prior to the expiration of the Initial Term or the Renewal Term which is then in effect.

4. Consideration.

(a) American Tower will pay its first installment of Rent within thirty (30) days of the Commencement Date. Thereafter, Rent is due and payable in advance on the first day of each calendar month to Landlord at Landlord's Notice Address. Rent will be prorated for any partial months, including, the month in which the Commencement Date occurs.

(b) On the Increase Date, the Rent will increase by the Increase Amount.

(c) In the event American Tower makes an overpayment of Rent or any other fees or charges to Landlord during the Term of this Agreement, American Tower may, but will not be required, to treat any such overpayment amount as prepaid Rent and apply such amount as a credit against future Rent due to Landlord.

(d) American Tower will not be required to remit the payment of Rent to more than two recipients at any given time.

5. Use.

(a) American Tower will be permitted to use the Site for the purpose of constructing, maintaining, removing, replacing, securing and operating a communications facility, including, but not limited to, the construction or installation and maintenance of a telecommunications tower (the "*Tower*"), structural tower base(s), guy anchors, guy wires, communications equipment, one or more buildings or equipment cabinets, radio transmitting and receiving antennas, personal property and related improvements and facilities on the Compound (collectively, the "*Tower Facilities*"), to facilitate the use of the Site as a site for the transmission and receipt of communication signals including, but not limited to, voice, data and internet transmissions and for any other uses which are incidental to the transmission and receipt of communication signals (the "*Intended Use*").

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(b) American Tower, at its sole discretion, will have the right, without prior notice or the consent of Landlord, to license or sublease all or a portion of the Site or the Tower Facilities to other parties (each, a "Collocator" and collectively, the "Collimators"). The Collimators will be entitled to modify the Tower Facilities and to erect additional improvements on the Compound including but not limited to antennas, dishes, cabling, additional buildings or shelters ancillary to the Intended Use. The Collimators will be entitled to all rights of ingress and egress to the Site and the right to install utilities on the Site that American Tower has under this Agreement.

6. Tower Facilities.

(a) American Tower will have the right, at American Tower's sole cost and expense, to erect the Tower Facilities which will be the exclusive property of American Tower throughout the Term as well as upon the expiration or termination of this Agreement.

(b) Landlord grants American Tower a non-exclusive easement in, over, across and through the Property and other real property owned by Landlord contiguous to the Site as may be reasonably required for construction, installation, maintenance, and operation of the Tower Facilities including: (i) access to the Site for construction machinery and equipment, (ii) storage of construction materials and equipment during construction of the Tower Facilities, and (iii) use of a staging area for construction, installation and removal of equipment.

(c) American Tower may, at its sole expense, use any and all appropriate means of restricting access to the Compound or the Tower Facilities, including, without limitation, construction of a fence and may install and maintain identifying signs or other signs required by any governmental authority on or about the Site, including any access road to the Site.

(d) American Tower will maintain the Compound, including the Tower Facilities, in a reasonable condition throughout the Term. American Tower is not responsible for reasonable wear and tear or damage from casualty and condemnation. Landlord grants American Tower the right to clear all trees, undergrowth, or other obstructions and to trim, cut, and keep trimmed all tree limbs which may interfere with or fall upon the Tower Facilities or the Site.

(e) American Tower will remove all of the above-ground portions of the Tower Facilities within 180 days following the expiration or termination of this Agreement.

(f) If the Tower is a guyed tower, Landlord grants American Tower an easement in, over, across and through the Property or any other real property owned by Landlord as may be necessary to American Tower during the Term of this Agreement for the installation, maintenance, alteration, removal, relocation and replacement of and access to guy wires and guy wire anchors which may be required by American Tower at its sole discretion and located outside of the Site.

7. Utilities.

(a) American Tower will have the right to install utilities, at American Tower's expense, and to improve present utilities on the Property and the Site. American Tower will have the right to permanently place utilities on (or to bring utilities across or under) the Site to service the Compound and the Tower Facilities.

(b) If utilities necessary to serve the equipment of American Tower or the equipment of any Collocator cannot be located within the Site, Landlord agrees to allow the installation of utilities on the Property or other real property owned by Landlord without requiring additional compensation from

Site Name: Center Point
Site Number: 281329

American Tower or any Collocator. Landlord will, upon American Tower's request, execute a separate recordable written easement or lease to the utility company providing such service evidencing this right.

(c) American Tower and the Collocators each may install backup generator(s).

8. Access

(a) In the event that the Site loses access to a public right of way during the Term, Landlord and American Tower will amend this Agreement, at no imposed cost to either party, to provide access to a public way by: (i) amending the location of the Easement; or (ii) granting an additional easement to American Tower.

(b) To the extent damage (including wear and tear caused by normal usage) to the Easement or any other route contemplated hereunder intended to provide American Tower with access to the Site and the Tower Facilities is caused by Landlord or Landlord's tenants, licensees, invitees or agents, Landlord will repair the damage at its own expense.

(c) Landlord will maintain access to the Compound from a public way in a free and open condition so that no interference is caused to American Tower by Landlord or lessees, licensees, invitees or agents of Landlord. In the event that American Tower's or any Collocator's access to the Compound is impeded or denied by Landlord or Landlord's lessees, licensees, invitees or agents, without waiving any other rights that it may have at law or in equity, American Tower may at its sole discretion deduct from Rent due under this Agreement an amount equal to [REDACTED] per day for each day that such access is impeded or denied.

9. Representations and Warranties of Landlord. Landlord represents and warrants to American Tower and American Tower's successors and assigns:

(a) Landlord has the full right, power, and authority to execute this Agreement;

(b) There are no pending or threatened administrative actions, including bankruptcy or insolvency proceedings under state or federal law, suits, claims or causes of action against Landlord or which may otherwise affect the Property;

(c) The Property is not presently subject to an option, lease or other contract which may adversely affect Landlord's ability to fulfill its obligations under this Agreement, and the execution of this Agreement by Landlord will not cause a breach or an event of default of any other agreement to which Landlord is a party. Landlord agrees that it will not grant an option or enter into any contract or agreement which will have any adverse effect on the Intended Use or American Tower's rights under this Agreement;

(d) No licenses, rights of use, covenants, restrictions, easements, servitudes, subdivision rules or regulations, or any other encumbrances relating to the Property prohibit or will interfere with the Intended Use;

(e) Landlord has good and marketable fee simple title to the Site, the Property and any other property across which Landlord may grant an easement to American Tower or any Collocator, free and clear of all liens and encumbrances. Landlord covenants that American Tower will have the quiet enjoyment of the Compound during the term of this Agreement. If Landlord fails to keep the Site free and clear of any liens and encumbrances, American Tower will have the right, but not the obligation, to satisfy any such lien or encumbrance and to deduct the full amount paid by American Tower on Landlord's behalf from future installments of Rent;

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(f) American Tower will at all times during this Agreement enjoy ingress, egress, and access from the Site 24 hours a day, 7 days a week, to an open and improved public road which is adequate to service the Site and the Tower Facilities; and

(g) These representations and warranties of Landlord survive the termination or expiration of this Agreement.

10. **Interference.** Landlord will not use, nor will Landlord permit its tenants, licensees, invitees or agents to use any portion of the Property in any way which interferes with the Intended Use, including, but not limited to, any use on the Property or surrounding property that causes electronic or physical obstruction or degradation of the communications signals from the Tower Facilities ("**Interference**"). Interference will be deemed a material breach of this Agreement by Landlord and Landlord will have the responsibility to terminate Interference immediately upon written notice from American Tower. Notwithstanding anything in this Agreement to the contrary, if the Interference does not cease or is not rectified as soon as possible, but in no event longer than 24 hours after American Tower's written notice to Landlord, Landlord acknowledges that continuing Interference will cause irreparable injury to American Tower, and American Tower will have the right, in addition to any other rights that it may have at law or in equity, to bring action to enjoin the Interference.

11. **Termination.** This Agreement may be terminated, without any penalty or further liability upon written notice as follows:

(a) By either party upon a default of any covenant or term of this Agreement by the other party which is not cured within 60 days of receipt of written notice of default (without, however, limiting any other rights available to the parties in law or equity); provided, that if the defaulting party commences efforts to cure the default within such period and diligently pursues such cure, the non-defaulting party may not terminate this Agreement as a result of that default.

(b) Upon 30 days' written notice by American Tower to Landlord if American Tower is unable to obtain, maintain, renew or reinstate any agreement, easement, permit, certificates, license, variance, zoning approval, or any other approval which may be required from any federal, state or local authority necessary to the construction and operation of the Tower Facilities or to the Intended Use (collectively, the "**Approvals**"); or

(c) Upon 30 days' written notice from American Tower to Landlord if the Site is or becomes unsuitable, in American Tower's sole, but reasonable judgment for use as a wireless communications facility by American Tower or by American Tower's licensee(s) or sublessee(s).

(d) In the event of termination by American Tower or Landlord pursuant to this provision, American Tower shall be relieved of all further liability hereunder.

12. **Taxes.**

(a) American Tower will pay any personal property taxes assessed on or attributable to the Tower Facilities. American Tower will reimburse Landlord for any increase to Landlord's real property taxes that are directly attributable to American Tower's Site and/or Tower Facilities upon receipt of the following: (1) a copy of Landlord's tax bill; (2) proof of payment; and (3) written documentation from the assessor of the amount attributable to American Tower. American Tower shall have no obligation to reimburse Landlord for any taxes paid by Landlord unless Landlord requests reimbursement within 12 months of the date said taxes were originally due. Additionally, as a condition precedent to Landlord

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having the right to receive reimbursement, Landlord shall, within 3 days of receipt of any notice from the taxing authority of any assessment or reassessment, provide American Tower with a copy of said notice. American Tower shall have the right to appeal any assessment or reassessment relating to the Site or Tower Facilities and Landlord shall either (i) designate American Tower as its attorney-in-fact as required to effect standing with the taxing authority, or (ii) join American Tower in its appeal.

(b) Landlord will pay when due all real property taxes and all other fees and assessments attributable to the Property, Compound and Easement. If Landlord fails to pay when due any taxes affecting the Property or the Site, American Tower will have the right, but not the obligation, to pay such taxes and either: (i) deduct the full amount of the taxes paid by American Tower on Landlord's behalf from future installments of Rent, or (ii) collect such taxes by any lawful means.

13. Environmental Compliance.

(a) Landlord represents and warrants that:

(i) No Hazardous Materials have been used, generated, stored or disposed of, on, under or about the Property in violation of any applicable law, regulation or administrative order (collectively, "*Environmental Laws*") by either Landlord or to Landlord's knowledge, any third party; and

(ii) To Landlord's knowledge, no third party been permitted to use, generate, store or dispose of any Hazardous Materials on, under, about or within the Property in violation of any Environmental Laws.

(b) Landlord will not, and will not permit any third party to use, generate, store or dispose of any Hazardous Materials on, under, about or within the Property in violation of any Environmental Laws.

(c) American Tower agrees that it will not use, generate, store or dispose of any Hazardous Material on, under, about or within the Site in violation of any applicable laws, regulations or administrative orders.

(d) The term "*Hazardous Materials*" means any: contaminants, oils, asbestos, PCBs, hazardous substances or wastes as defined by federal, state or local environmental laws, regulations or administrative orders or other materials the removal of which is required or the maintenance of which is prohibited or regulated by any federal, state or local government authority having jurisdiction over the Property.

14. Indemnification.

(a) General.

(i) Landlord, its heirs, grantees, successors, and assigns will exonerate, hold harmless, indemnify, and defend American Tower from any claims, obligations, liabilities, costs, demands, damages, expenses, suits or causes of action, including costs and reasonable attorney's fees, which may arise out of: (A) any injury to or death of any person; (B) any damage to property, if such injury, death or damage arises out of or is attributable to or results from the acts or omissions of Landlord, or Landlord's principals, employees, invitees, agents or independent contractors; or (C) any breach of any representation or warranty made by Landlord in this Agreement.

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(ii) American Tower, its grantees, successors, and assigns will exonerate, hold harmless, indemnify, and defend Landlord from any claims, obligations, liabilities, costs, demands, damages, expenses, suits or causes of action, including costs and reasonable attorney's fees, which may arise out of: (A) any injury to or death of any person; (B) any damage to property, if such injury, death or damage arises out of or is attributable to or results from the negligent acts or omissions of American Tower, or American Tower's employees, agents or independent contractors; or (C) any breach of any representation or warranty made by American Tower in this Agreement.

(b) Environmental Matters.

(i) Landlord, its heirs, grantees, successors, and assigns will indemnify, defend, reimburse and hold harmless American Tower from and against any and all damages arising from the presence of Hazardous Materials upon, about or beneath the Property or migrating to or from the Property or arising in any manner whatsoever out of the violation of any Environmental Laws, which conditions exist or existed prior to or at the time of the execution of this Agreement or which may occur at any time in the future through no fault of American Tower. Notwithstanding the obligation of Landlord to indemnify American Tower pursuant to this Agreement, Landlord will, upon demand of American Tower, and at Landlord's sole cost and expense, promptly take all actions to remediate the Property which are required by any federal, state or local governmental agency or political subdivision or which are reasonably necessary to mitigate environmental damages or to allow full economic use of the Site, which remediation is necessitated from the presence upon, about or beneath the Property of a Hazardous Material. Such actions include but not be limited to the investigation of the environmental condition of the Property, the preparation of any feasibility studies, reports or remedial plans, and the performance of any cleanup, remediation, containment, operation, maintenance, monitoring or actions necessary to restore the Property to the condition existing prior to the introduction of such Hazardous Material upon, about or beneath the Property notwithstanding any lesser standard of remediation allowable under applicable law or governmental policies.

(ii) American Tower, its grantees, successors, and assigns will indemnify, defend, reimburse and hold harmless Landlord from and against environmental damages caused by the presence of Hazardous Materials on the Compound in violation of any Environmental Laws and arising solely as the result of American Tower's activities after the execution of this Agreement.

15. Right of First Refusal; Sale of Property.

(a) During the Term, prior to selling the Site or any portion of or interest in the Property or the Site, including but not limited to a leasehold interest or easement, or otherwise transfer Landlord's interest in Rent, and prior to assigning the Rent or any portion of Rent to a third party, Landlord shall notify American Tower in writing of the sale price and terms offered by a third party (the "Offer"), together with a copy of the Offer. American Tower will have the right of first refusal to purchase the real property interest or Rent or portion of Rent being sold by Landlord to such third party on the same financial terms of the Offer. American Tower will exercise its right of first refusal within 30 days of receipt of Landlord's notice and if American Tower does not provide notice within 30 days, American Tower will be deemed to have not exercised its right of first refusal. If American Tower does not exercise its right of first refusal, section 15(b) of this Agreement will control the terms of the sale.

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

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Agreement, including Landlord's obligation to cooperate with American Tower as provided hereunder, which obligation Landlord would no longer have the legal right or ability to perform following the sale without requiring compensation from American Tower or any Collocator to be paid to such purchaser.

16. Assignment.

(a) Any sublease, license or assignment of this Agreement that is entered into by Landlord or American Tower is subject to the provisions of this Agreement.

(b) Landlord may assign this Agreement in its entirety to any third party in conjunction with a sale of the Property in accordance with Paragraph 15 of this Agreement. Landlord will not otherwise assign less than Landlord's full interest in this Agreement without the prior written consent of American Tower.

(c) American Tower may assign this Agreement without prior notice to or the consent of Landlord. Upon assignment, American Tower shall be relieved of all liabilities and obligations hereunder and Landlord shall look solely to the assignee for performance under this Agreement and all obligations hereunder.

(d) American Tower may mortgage or grant a security interest in this Agreement and the Tower Facilities, and may assign this Agreement and the Tower Facilities to any such mortgagees or holders of security interests including their successors and assigns (collectively, "*Secured Parties*"). If requested by American Tower, Landlord will execute such consent to such financing as may reasonably be required by Secured Parties. In addition, if requested by American Tower, Landlord agrees to notify American Tower and American Tower's Secured Parties simultaneously of any default by American Tower and to give Secured Parties the same right to cure any default as American Tower. If a termination, disaffirmance or rejection of the Agreement by American Tower pursuant to any laws (including any bankruptcy or insolvency laws) occurs, or if Landlord will terminate this Agreement for any reason, Landlord will give to Secured Parties prompt notice thereof and Secured Parties will have the right to enter upon the Compound during a 30-day period commencing upon Secured Parties' receipt of such notice for the purpose of removing any Tower Facilities. Landlord acknowledges that Secured Parties are third-party beneficiaries of this Agreement.

17. Condemnation. If a condemning authority takes all of the Site, or a portion sufficient in American Tower's sole judgment, to render the Site unsuitable for the Intended Use, this Agreement will terminate as of the date the title vests in the condemning authority. Landlord and American Tower will share in the condemnation proceeds in proportion to the values of their respective interests in the Site (which for American Tower includes, where applicable, the value of the Tower Facilities, moving expenses, prepaid rent and business dislocation expenses). If a condemning authority takes less than the entire Site such that the Site remains suitable for American Tower's Intended Use, the Rent payable under this Agreement will be reduced automatically by such percentage as the area so condemned bears to the Site as of the date the title vests in the condemning authority. A sale of all or part of the Site to a purchaser with the power of eminent domain in the face of the exercise of eminent domain power will be treated as a taking by condemnation for the purposes of this paragraph.

18. Insurance. American Tower will purchase and maintain in full force and effect throughout the Option Period and the Term such general liability and property damage policies as American Tower may deem necessary. Said policy of general liability insurance will at a minimum provide a combined single limit of \$1,000,000.

19. Waiver of Damages.

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(a) In the event that American Tower does not exercise its Option: (i) Landlord's sole compensation and damages will be fixed and liquidated to the sums paid by American Tower to Landlord as consideration for the Option; and (ii) Landlord expressly waives any other remedies it may have for a breach of this Agreement including specific performance and damages for breach of contract.

(b) Neither Landlord nor American Tower will be responsible or liable to the other party for any loss or damage arising from any claim to the extent attributable to any acts of omissions of other licensees or tower users occupying the Tower Facilities or vandalism or for any structural or power failures or destruction or damage to the Tower Facilities except to the extent caused by the negligence or willful misconduct of such party.

(c) EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT, IN NO EVENT WILL LANDLORD OR AMERICAN TOWER BE LIABLE TO THE OTHER FOR, AND AMERICAN TOWER AND LANDLORD EACH HEREBY WAIVE THE RIGHT TO RECOVER INCIDENTAL, CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOSS OF USE OR LOSS OF BUSINESS OPPORTUNITY), PUNITIVE, EXEMPLARY AND SIMILAR DAMAGES.

20. **Confidentiality.** Landlord will not disclose to any third party the Rent payable by American Tower under this Agreement and will treat such information as confidential, except that Landlord may disclose such information to prospective buyers, prospective or existing lenders, Landlord's affiliates and attorneys, or as may be required by law or as may be necessary for the enforcement of Landlord's rights under the Agreement.

21. **Subordination Agreements.**

(a) If the Site is encumbered by a mortgage or deed of trust, within 30 days of receipt of a written request from American Tower, Landlord agrees to execute and obtain the execution by its lender of a non-disturbance and attornment agreement in the form provided by American Tower, to the effect that American Tower and American Tower's sublessees and licensees will not be disturbed in their occupancy and use of the Site by any foreclosure or to provide information regarding the mortgage to American Tower.

(b) Should a subordination, non-disturbance and attornment agreement be requested by Landlord or a lender working with Landlord on a loan to be secured by the Property and entered into subsequent to the Execution Date, American Tower will use good faith efforts to provide Landlord or Landlord's lender with American Tower's form subordination, non-disturbance and attornment agreement executed by American Tower within 30 days of such request.

22. **Notices.** All notices or demands by or from American Tower to Landlord, or Landlord to American Tower, required under this Agreement will be in writing and sent (United States mail postage pre-paid, certified with return receipt requested or by reputable national overnight carrier service, transmit pre-paid) to the other party at the addresses set forth in paragraph 1 of this Agreement or to such other addresses as the parties may, from time to time, designate consistent with this paragraph 22, with such new notice address being effective 30 days after receipt by the other party. Notices will be deemed to have been given upon either receipt or rejection.

23. **Further Acts.**

(a) Within 15 days after receipt of a written request from American Tower, Landlord will execute any document necessary or useful to protect American Tower's rights under this Agreement or to

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facilitate the Intended Use including documents related to title, zoning and other Approvals, and will otherwise cooperate with American Tower in its exercise of its rights under this Agreement.

(b) American Tower will be entitled to liquidated damages for the revenue lost by American Tower as a result of any delay caused by Landlord's unwillingness to execute a document or to take any other action deemed necessary by American Tower to protect American Tower's leasehold rights or to facilitate the Intended Use. As the actual amount of such lost revenue is difficult to determine, the parties agree that American Tower may deduct the amount of [REDACTED] day from future installments of Rent for any delay to American Tower caused by Landlord's failure or unwillingness to act, such amount being an estimate of American Tower's lost revenue. American Tower's right to collect such liquidated damages will in no way affect American Tower's right to pursue any and all other legal and equitable rights and remedies permitted under applicable laws.

24. Memorandum of Lease. Simultaneously with the execution of this Agreement, the parties will enter into the Memorandum of Lease attached to this Agreement as Exhibit C which American Tower may record in the public records of the county of the Property. Landlord acknowledges and agrees that after Landlord signs the Memorandum of Lease but before American Tower records it, American Tower may add both: (a) a reference to the recording granting Landlord its interest in the Property; and (b) a legal description of the Site as Exhibit B. Landlord agrees to execute and return to American Tower a recordable Amended Memorandum of Lease in form supplied by American Tower if: (i) the information included in the Memorandum of Lease changes, or (ii) if it becomes clear that such information is incorrect or incomplete or if this Agreement is amended.

25. Miscellaneous.

(a) This Agreement runs with the Property and is binding upon and will inure to the benefit of the parties, their respective heirs, successors, personal representatives and assigns.

(b) American Tower may at American Tower's sole cost and expense procure an abstract of title or a commitment to issue a policy of title insurance (collectively "Title") on the Property.

(c) Landlord hereby waives any and all lien rights it may have, statutory or otherwise, in and to the Tower Facilities or any portion thereof, regardless of whether or not same is deemed real or personal property under applicable laws.

(d) The substantially prevailing party in any litigation arising hereunder is entitled to its reasonable attorney's fees and court costs, including appeals, if any.

(e) Each party agrees to furnish to the other, within 30 days after request, such estoppel information as the other may reasonably request.

(f) This Agreement constitutes the entire agreement and understanding of Landlord and American Tower with respect to the subject matter of this Agreement, and supersedes all offers, negotiations and other agreements. There are no representations or understandings of any kind not stated in this Agreement. Any amendments to this Agreement must be in writing and executed and delivered by Landlord and American Tower.

(g) If either Landlord or American Tower is represented by a real estate broker in this transaction, that party is fully responsible for any fees due such broker and will hold the other party harmless from any claims for commission by such broker.

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(h) The Agreement will be construed in accordance with the laws of the state in which the Site is situated.

(i) If any term of the Agreement is found to be void or invalid, the remainder of this Agreement will continue in full force and effect.

(j) American Tower may obtain title insurance on its interest in the Site, and Landlord will cooperate by executing any documentation required by the title insurance company.

(k) This Agreement may be executed in two or more counterparts, all of which are considered one and the same agreement and become effective when one or more counterparts have been signed by each of the parties, it being understood that all parties need not sign the same counterpart.

(l) Landlord will not, during the Option Period or the Term, enter into any other lease, license, or other agreement for the same or similar purpose as the Intended Use, on or adjacent to the Property.

(m) Failure or delay on the part of either party to exercise any right, power or privilege hereunder will not operate as a waiver thereof and waiver of breach of any provision hereof under any circumstances will not constitute a waiver of any subsequent breach.

(n) The parties agree that irreparable damage would occur if any of the provisions of this Agreement were not performed in accordance with their specified terms or were otherwise breached. Therefore, the parties agree the parties will be entitled to an injunction(s) in any court in the state in which the Site is located to prevent breaches of the provisions of this Agreement and to enforce specifically the terms and provisions of the Agreement, this being in addition to any other remedy to which the parties are entitled at law or in equity.

(o) Each party executing this Agreement acknowledges that it has full power and authority to do so and that the person executing on its behalf has the authority to bind the party.

(p) The parties agree that a scanned or electronically reproduced copy or image of this Agreement will be deemed an original and may be introduced or submitted in any action or proceeding as competent evidence of the execution, terms and existence hereof notwithstanding the failure or inability to produce or tender an original, executed counterpart of this Agreement and without the requirement that the unavailability of such original, executed counterpart of this Agreement first be proven.

[SIGNATURES APPEAR ON NEXT PAGE]

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IN WITNESS WHEREOF, Landlord and American Tower have each executed this Agreement as of the respective dates written below.

[INSERT OWNER AND STATE APPROPRIATE SIGNATURE BLOCKS, CONFORMING WITH THE STATE'S REQUIREMENT FOR WITNESSES.]

LANDLORD:

Johnny Graves and his wife Glaydell Graves

Johnny Graves and his wife Glaydell Graves, as to a 1/3 undivided interest, Johnny Wayne Graves, Jr., as to a 1/3 undivided interest, and David Graves, as to a 1/3 undivided interest

Johnny Graves

Name: Johnny Graves

Date: 07-25-13

Glaydell Graves

Name: Glaydell Graves

Date: 07-25-13

Johnny Wayne Graves

Name: Johnny Wayne Graves, Jr.

Date: 08-06-13

David Graves

Name: David Graves

Date: 07-25-2013

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STATE OF KENTUCKY
COUNTY OF MONROE

I, a Notary Public of the County and State aforesaid, certify that Johnny Graves came before me this day and acknowledged the execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 25 day of July, 2013.

[Affix Notary Seal]

Terene Brown

Notary Public

My commission expires:

Jan. 15, 2015

STATE OF KENTUCKY
COUNTY OF MONROE

I, a Notary Public of the County and State aforesaid, certify that Glaydell Graves came before me this day and acknowledged the execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 25 day of July, 2013.

[Affix Notary Seal]

Terene Brown

Notary Public

My commission expires:

Jan. 15, 2015

STATE OF KENTUCKY
COUNTY OF MONROE

I, a Notary Public of the County and State aforesaid, certify that David Graves came before me this day and acknowledged the execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 25 day of July, 2013.

[Affix Notary Seal]

Terene Brown

Notary Public

My commission expires:

Jan. 15, 2015

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STATE OF KENTUCKY
COUNTY OF CLARK

I, a Notary Public of the County and State aforesaid, certify that Johnny Wayne Graves, Jr. came before me this day and acknowledged the execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 6th day of August, 2013.

[Affix Notary Seal]

Mel W. Johnson

Notary Public

My commission expires:

July 24 2014
FB 923371



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AMERICAN TOWER:

American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers LLC

By:

[Signature]
Name: STEVE VONDRAN
Title: Senior Vice President
General Counsel

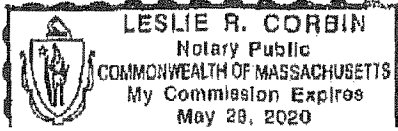
Date:

9/3/13

COMMONWEALTH OF MASSACHUSETTS)
) ss:
COUNTY OF MIDDLESEX)

On the 3rd day of September 2013, the undersigned notary public, personally appeared Steve Vondran, proved to me through satisfactory evidence of identification, which were personally known, to be the person who name is signed on the preceding or attached document, and acknowledged that he/she signed it voluntarily for its stated purpose, as Senior Vice President, of American Towers LLC, before me.

[Signature]
Notary Public
My Commission Expires:



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The following exhibits are attached to this Agreement and incorporated into this Agreement:

Exhibit A	Description or Depiction of Property
Exhibit B	Description or Depiction of Site
Exhibit C	Memorandum of Lease

Site Name: Center Point
Site Number: 281329

EXHIBIT A

DESCRIPTION OR DEPICTION OF PROPERTY

The Property is described and/or depicted as follows:

SITUATED IN THE COUNTY OF MONROE, STATE OF KENTUCKY:

PARCEL ONE

BEGINNING ON A STONE NEAR A MEN HOUSE ON NORTH SIDE OF OLD GRAVEL ROAD CORNER TO TOMMY PAGE; THENCE WITH SAID PAGE NORTH 7 1/2 DEG E 43 FEET TO A STAKE CORNER TO PAGE WITH SAME N 66 DEG W 135 FEET TO STONE CORNER OF PAGE; WITH SAID PAGE S 71/2 W 43 FEET TO A STAKE NEAR A LIGHT POLE ON N SIDE OF OLD ROAD; THENCE WITH PAGE AND OLD ROAD, N 92 1/2 DEG W 107 FEET TO A STAKE AT THE OLD WARDS BRANCH ROAD IN PAGE'S LINE; THENCE WITH OLD ROAD AND FRANK THOMPSON S 5 DEG W FEET TO A STAKE ON WEST SIDE OF HIGHWAY 100; THENCE WITH SAID WEST SIDE OF HIGHWAY 100 N 15 DEG E 400 EAST TO TURN OF SAID HIGHWAY, WITH SAID HIGHWAY 100, N 61 DEG E 300 FEET TO MOUTH OF THE OLD ROAD; THENCE WITH OLD ROAD AND PAGE N 59 DEG W 74 FEET TO THE BEGINNING.

TAX I.D. NUMBER: 63-17

PARCEL TWO

TRACT NO. 1:

LYING ON THE WATERS OF WARDS BRANCH AND BOUNDED AS FOLLOWS: BEGINNING ON A SUGAR TREE NEAR A ROAD; THENCE N 87 W 32 P TO A FORKED HICKORY ON THE TOP OF A RIDGE; THENCE N 48 W 20 P TO AN ELM; THENCE S 68 W 39 P TO A SMALL WHITE OAK AND SMALL HICKORY NEAR MEADOW'S LINE; THENCE WITH HIS LINE TO A SUGAR TREE NEAR A BLUFF OF ROCKS THE CORNER TO SAME AND CONTINUING WITH MEADOW'S LINE TO A BEECH IN FISHGAW HOLLOW; THENCE UP THE HOLLOW TO THE PUBLIC ROAD RUNNING FROM CENTER POINT TO TOMPKINSVILLE, KNOWN AS THE RIDGE ROAD; THENCE WITH SAME TO TREE TOOLEY'S LAND, WITH HIS LINE, 25 P TO THE BEGINNING.

TRACT NO. 2:

BEGINNING AT A WHITE OAK ON S SIDE OF TOMPKINSVILLE AND CENTER POINT ROAD N 19 E 56 P BY GRIDDE'S DEED, BY MEASURE 82 P TO WHITE OAK N 52 W 40 P TO POPLAR S 72 E 10 P TO BEECH AND HICKORY S 10 E P TO WHITE OAK AND DOGWOOD S 14 W 14 P TO AN ASH S 14 P TO 2 WHITE OAK S 20 E 20 P TO AN ASH S 58 E 28 P TO DOGWOOD AND HORNBEEAN WITH THE GRIDER LINE TO HICKORY N OF BARN SE DIRECTION TO SORE ON PUBLIC ROAD WITH THE MEANDERS OF THE ROAD TO THE BEGINNING.

TRACT NO. 3:

BEGINNING ON A STONE ON N SIDE OF OLD TOMPKINSVILLE AND CENTER POINT ROAD; THENCE WITH MEANDERS OF ROAD A NW COURSE TO A STONE ON N SIDE OF ROAD; THENCE N 28-1/2 W 5 P AND 8 FEET TO A HICKORY IN THE GRIDER LINE; THENCE N 67-1/2 E 4 P AND 14 FEET TO A HICKORY IN GRIDER LINE; THENCE WITH GRIDER LINE SOUTH EASTWARD 46 P TO A BLACK WALNUT IN HOLLOW NEAR FIELD; THENCE S 9 W 3 P AND 12 FEET TO THE BEGINNING.

TAX I.D. NUMBER: 77-17

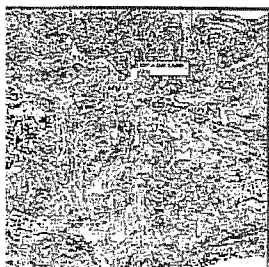
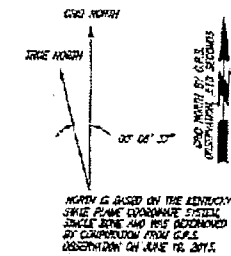
Site Name: Center Point
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EXHIBIT B

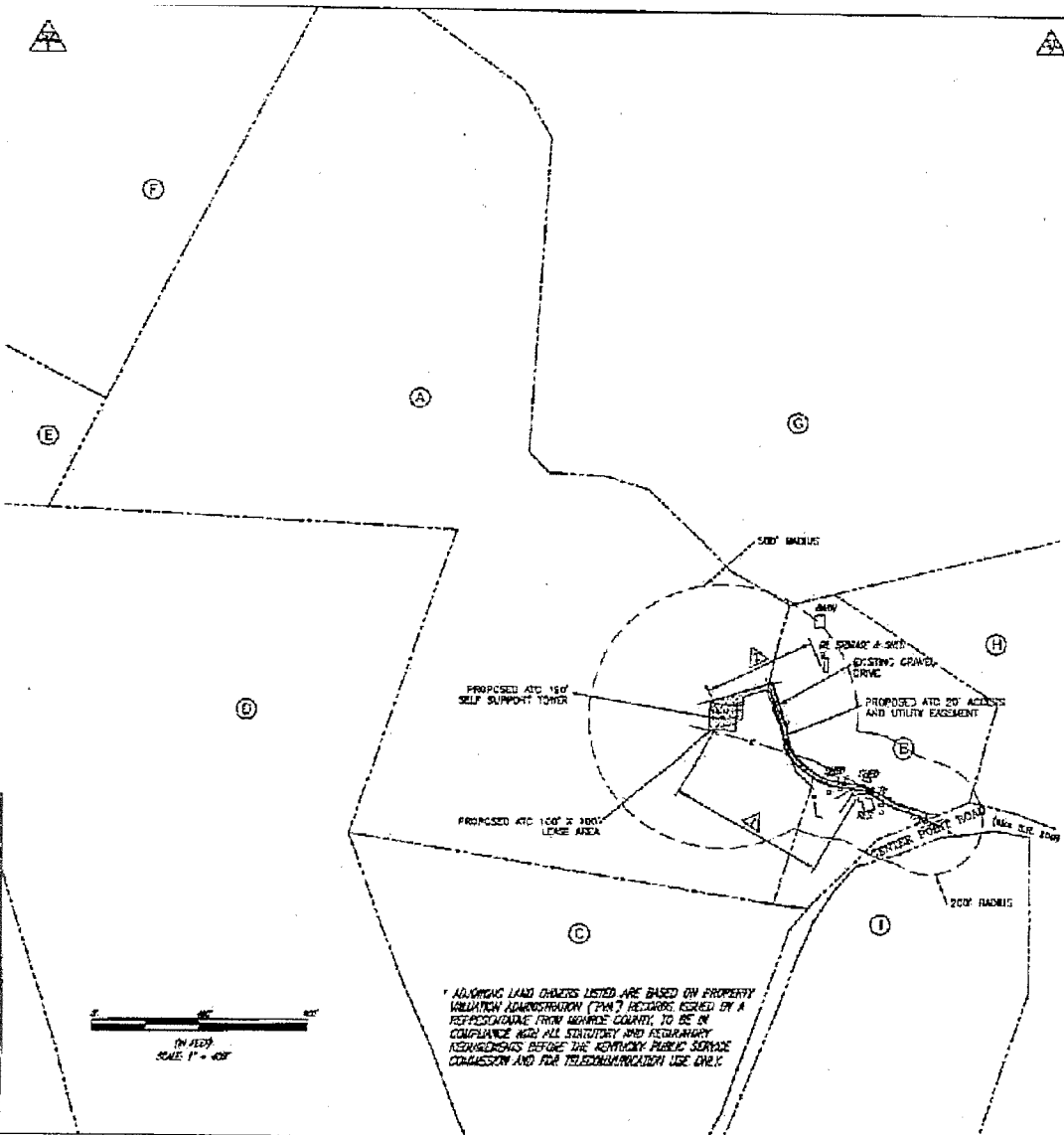
DESCRIPTION OR DEPICTION OF SITE

Locations are approximate. American Tower may, at its option, replace this exhibit with a copy of the survey of the Site.

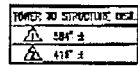
SHEET 1	
	- VELOCITY AND 500' STRATEGICAL MAP
	- ABUTTERS PROPERTY OWNERS
	- U.S.G.S. ROAD MAP
SHEET 2	
	- LEASE AREA
	- LEGAL DESCRIPTIONS
	- FLOOD ZONE DATA



QUAD MAP
SCALE 1" = 2000'
USGS 7 1/2' MSCALE QUAD MAP OF (GRID MAP SHEET)



- (A) 77-17
JOHNNY GRAYES ET AL.
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (B) 83-17
JOHNNIE G. GRAYES
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (C) 83-18
PATRICIA COMER
3705 COUNTY HOUSE ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (D) 77-18
HERMAN L. JOHNSON
1597 OLD GLASGOW ROAD
TOMPKINSVILLE, KY 42167
- (E) 77-19
JOHNNIE G. GRAYES
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NO ZONING
- (G) 77-11
WILLA DEAN WHITE
4673 WESHACK ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (H) 77-39
JAMES LEE ELMORE
1215 HODGINS HIGHWAY
SUMMERSVILLE, KY 42782
NO ZONING
- (I) 83-15
LUCAS & VALEDE, GERALD
8585 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
- (J) 83-20
STONEY MARTIN
2229 MT. HERMON ROAD
MT. HERMON, KY 42157
NO ZONING



SITE NUMBER:	144243	
SITE NAME:	CENTER POINT	
SITE ADDRESS:	8475 CENTER POINT ROAD TOMPKINSVILLE, KY 42167	
LEASE AREA:	15000 SQ.FT.	
PROPERTY OWNER:	GRAYES, JOHNNIE et al 8475 CENTER POINT ROAD TOMPKINSVILLE, KY 42167	
MAP NUMBER:	77-17	
PARCEL NUMBER:	83-17	
SOURCE OF TITLE:	DEED 79, PAGE 107 DEED 80, PAGE 67	
DATE REC.	DATE DTS.	DATE
JUN	ISSR	06.22.13
FSM PROJECT NO:		
13-8288		

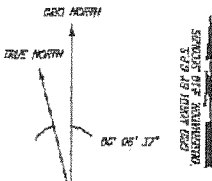
SHEET 1 OF 2

REVISIONS:

ABUTTERS MAP
CENTER POINT
144243
SITE ADDRESS: 8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
OWNER ADDRESS: 8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

SHEET 2

- LEASE AREA
- LEGAL DESCRIPTIONS
- FLOOD ZONE DATA



LINE LEGEND

---	EXISTING ELEC.
---	UNDERGROUND GAS LINE
---	UNDERGROUND WATER LINE
---	OPENING ELEC. & TELEPHONE LINE
---	UNDERGROUND TELEPHONE LINE
---	DEBRIS/SEWER SINKER LINE
---	PROPOSED FENCE
---	SUBJECT PROPERTY BOUNDARY
---	RIGHT OF WAY BOUNDARY
---	ADJ. STR. ADJ. BOUNDARY
---	OR UTILITIES DO NOT NECESSARILY APPEAR ON DRAWING
---	USE ONLY AS APPROPRIATE

COORDINATE POINT LOCATION
 THIS POINT
 ELEVATION: 857.3
 GRADE PLANE COORDINATE SINGLE ZONE
 (NAD 83) (NAD 83)
 CALCULATOR: WILSON 2.0
 MEASUREMENT: 454.628/3.177

NORTH IS BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM SINGLE ZONE AND WAS DETERMINED BY COMPARISON FROM GPS MEASUREMENT ON JUNE 18, 2014.

SURVEYOR'S NOTES
 SECTY OF RECORD IS A COPY OBSERVATION ON JUNE 18, 2014
 TO RECORD THE UNDERGROUND PIPE LOCATION
 THE OWNER ADVISED THAT THE UNDERGROUND PIPE IS MADE OF GALV. STEEL
 NO WORKING OF PUBLIC RECORDS WAS DONE BY THE SURVEYOR
 TO RECORD THE UNDERGROUND PIPE LOCATION IN THE CASE OF THE FUTURE FLOOD
 THE SURVEYOR DOES NOT REPRESENT A FLOOD HAZARD
 EXISTING CONDITIONS ARE AT THE SURVEYOR'S RISK

PROJECT BENCHMARK
 HEIGHT: 114.28/2.00
 SIZE: 40/20/20/20
 ELEVATION: 876.67
 LOCATION: BEING A SET FROM ROAD 14.5' SOUTH OF THE SOUTH WEST CORNER OF THE PROPOSED LEASE AREA.

SYMBOL LEGEND

- FENCE POST
- CONCRETE POWER POLE
- METAL POWER POLE
- DIRT PILE
- GUY POLE
- TELEPHONE POLE/BOX
- GUY ANCHOR
- WAREHOUSE
- WHITE WALL
- WHITE WOOD
- PIPE HOLE
- BRICK OR STONE
- FENCE POST
- SPAN CLAMBER
- SET OF STAIR
- BRICK CONCRETE WALK
- EXISTING AS SHOWN
- PROPOSED AS SHOWN

ABBREVIATIONS

- EP: EDGE OF PAVEMENT
- ROW: RIGHT OF WAY
- E: ELEVATION
- BM: BENCHMARK
- CONC: CONCRETE
- CUR: CURB
- AS: ASBESTOS
- CC: CEMENT
- FOR: POINT OF BEGINNING
- ST: STEEL

LEGAL DESCRIPTIONS

This is a description for American Tower Corporation, of a parcel of land as is located in the property of Johnny & Claydell Graves as tenants in common, being more or less, as shown and described as follows:

LEASE AREA

Land shown in Survey, described and being a portion of the conveyed to Johnny Graves et al and recorded in Deed Book 70, Page 874 in the Office of the Clerk of the Warren County Court more particularly described as follows:

Commencing at a set of 65 feet rod with one stamped "TITAN 3222" being the Southwest corner of a Parcel of Land Area located at KY State Plane coordinate Northing 2448481.18 (2nd Zone) and Easting 467734.68 (2nd Zone) by which the Kentucky State Plane Coordinate System, Single Zone of 100 feet to a set of 65 feet rod with one stamped "TITAN 3222" being the South 22 degrees 22 minutes 22 seconds East 200 feet to a set of 65 feet rod with one stamped "TITAN 3222" being the South 22 degrees 22 minutes 22 seconds East 100 feet to a set of 65 feet rod with one stamped "TITAN 3222" being the South 22 degrees 22 minutes 22 seconds East 100 feet to the point of beginning, containing 10,000.00 square feet (2.22 acres).

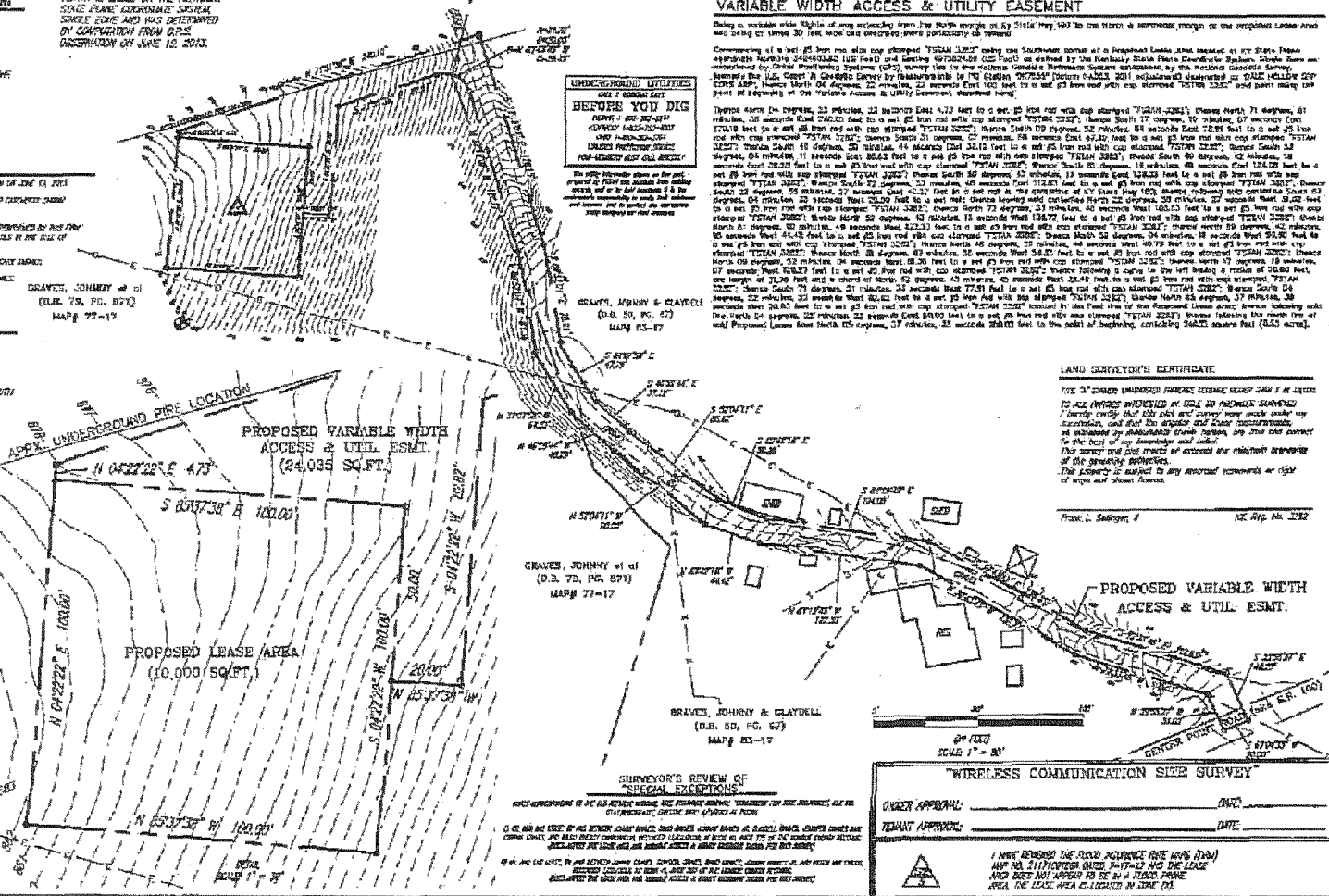
These lands 04 degrees 22 minutes 22 seconds East (Point of Beginning) as defined by the Kentucky State Plane Coordinate System (Single Zone) 100 feet to a set of 65 feet rod with one stamped "TITAN 3222" being the South 22 degrees 22 minutes 22 seconds East 100 feet to a set of 65 feet rod with one stamped "TITAN 3222" being the South 22 degrees 22 minutes 22 seconds East 100 feet to the point of beginning, containing 10,000.00 square feet (2.22 acres).

VARIABLE WIDTH ACCESS & UTILITY EASEMENT

Being a variable width Right of Way easement from the North corner of 65 feet rod with one stamped "TITAN 3222" being the Southwest corner of a Parcel of Land Area located at KY State Plane coordinate Northing 2448481.18 (2nd Zone) and Easting 467734.68 (2nd Zone) as defined by the Kentucky State Plane Coordinate System, Single Zone of 100 feet to a set of 65 feet rod with one stamped "TITAN 3222" being the South 22 degrees 22 minutes 22 seconds East 100 feet to the point of beginning, containing 24,036.59 square feet (5.51 acres).

Commencing at a set of 65 feet rod with one stamped "TITAN 3222" being the Southwest corner of a Parcel of Land Area located at KY State Plane coordinate Northing 2448481.18 (2nd Zone) and Easting 467734.68 (2nd Zone) as defined by the Kentucky State Plane Coordinate System, Single Zone of 100 feet to a set of 65 feet rod with one stamped "TITAN 3222" being the South 22 degrees 22 minutes 22 seconds East 100 feet to the point of beginning, containing 24,036.59 square feet (5.51 acres).

UNDERGROUND UTILITIES
 ONE 2" GALV. STEEL UNDERGROUND PIPE LOCATION
 BEFORE YOU DIG
 CALL 811
 1-800-4-A-DIG
 OR VISIT WWW.811KY.COM
 FOR MORE INFORMATION
 THIS INFORMATION IS FOR YOUR INFORMATION ONLY AND DOES NOT REPRESENT A FLOOD HAZARD



LAND SURVEYOR'S CERTIFICATE
 I, the undersigned, being a duly licensed land surveyor in the State of Kentucky, do hereby certify that I am the author of the foregoing plat, and that the same is a true and correct copy of the original on file in my office, and that I am a duly licensed land surveyor in the State of Kentucky, and that I am a duly licensed land surveyor in the State of Kentucky, and that I am a duly licensed land surveyor in the State of Kentucky.

Frank L. Sweeney, Jr. KY Reg. No. 2282

"WIRELESS COMMUNICATION SITE SURVEY"

OWNER APPROVAL: _____ DATE: _____

TENANT APPROVAL: _____ DATE: _____

I HEREBY CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT COPY OF THE ORIGINAL ON FILE IN MY OFFICE, AND THAT I AM A DULY LICENSED LAND SURVEYOR IN THE STATE OF KENTUCKY.



FSI
 Formerly F.S. Leach & C. Allen Steel Company
 Land Surveyors and Consulting Engineers
 228 E. Harmon Blvd
 Louisville, KY 40217
 Phone: (502) 622-2888 / (502) 622-4111
 Fax: (502) 624-4240

SITE ADDRESS:
 144243

SITE NAME:
 OTHER POINT

SITE ADDRESS:
 5425 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

LEASE AREA:
 10,000 SQ.FT.

PROPERTY OWNER:
 GRAVES, JOHNNY et al
 5425 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

DATE OF TITLE:
 DEED BOOK PAGE 874
 DEED BOOK PAGE 87

DATE OF: _____ **DATE OF:** _____ **DATE:** _____

ESTIM. PROJECT NO.:
 13-2028

SHEET 2 OF 2

REVISIONS:

VACANT LAND

CENTER POINT
 144243
 SITE ADDRESS: 5425 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167
 OWNER ADDRESS: 5425 CENTER POINT ROAD
 TOMPKINSVILLE, KY 42167

RECORDED 9-15-95

Book 179 87, 1

Page 841

DEED

Rec'd
112.00
Dec 7 1995
\$ 48.00

THIS DEED OF CONVEYANCE, made and entered into this 15 day of September, 1995, by and between, ROYT T. BLYTHE, a single person and his daughter, JOYCE DEAN VALENTINE, a single person, (the Grantors) of Tompkinsville, Monroe County, Kentucky, parties of the first and JOJINNY GRAVES and his wife, GLAYDELLE GRAVES, a one-third undivided interest, JOHNNY WAYNE GRAVES, JR., a one-third undivided interest, and DAVID GRAVES, a one-third undivided interest (the Grantees) of Center Point Rd., Tompkinsville, Monroe County, Kentucky 42167, parties of the second part;

WITNESSETH:

For and in consideration of the sum of \$36,000.00 (THIRTY SIX THOUSAND DOLLARS AND 00/100) cash in hand paid, the receipt and sufficiency of which is hereby acknowledged, the Grantors have bargained and sold and by these presents do hereby bargain, sell, grant and convey unto the Grantees the following described real property located in Monroe County, Kentucky, to-wit:

TRACT NO. 1:

Lying on the waters of Wards Branch and bounded as follows: BEGINNING on a sugar tree near a road; thence N 87 W 32 P to a forked hickory on the top of a ridge; thence N 48 W 20 P to an elm; thence S 68 W 39 P to a small white oak and small hickory near Meadow's line; thence with his line to a sugar tree near a bluff of rocks the corner to same and continuing with Meadow's line to a beech in Fishgap hollow; thence up the hollow to the public road running from Center Point to Tompkinsville, known as the ridge road; thence with same to Thee Tooley's land, with his line, 35 P to the beginning, containing 75 acres, more or less.

TRACT NO. 2:

BEGINNING at a white oak on S side of Tompkinsville and Center Point Road N 19 E 56 P by Gridre's deed, by measure 82 P to white oak N 52 W 40 P to poplar S 72 E 10 P to beech and hickory S 10 E P to white oak and dogwood S 14 W 14 P to an ash S 14 P to 2 white oak S 20 E 20 P to an ash S 58 E 28 P to dogwood and hornbeam with the Gridre line to Hickory N of barn SE direction to sore on public road with the meanders of the road to the beginning, containing 14-1/2 acres, more or less.

TRACT 3:

BEGINNING on a stone on N side of old Tompkinsville and

Center Point road; thence with meandres of road a NW course to a stone on N side of road; thence N 25-1/2 W 5 P and 8 feet to a hickory in the Grider line; thence N 67-1/2 E 4 P and 14 feet to a hickory in Grider line; thence with Grider line South Eastward 46 P to a black walnut in hollow near field; thence S 9 W 8 P and 12 feet to the beginning, containing 2-1/2 acres, more or less.

BEING the same land conveyed unto Roy T. Blythe and Joyce Dean Valentine by deed dated January 9, 1988, from Donald Wright and his wife, Billie Dean Wright, deed of record in Deed Book 62 at page 681, records of the Monroe County Court Clerk's Office.

TO HAVE AND TO HOLD the above described real property, with all improvements, privileges and appurtenances thereto belonging, unto JOHNNY GRAVES and his wife, GLAYDELL E GRAVES, one-third undivided interest, JOHNNY WAYNE GRAVES, JR., one-third undivided interest and DAVID GRAVES, one-third undivided interest, their heirs and assigns forever, with Covenants of General Warranty.

The parties hereto state that the consideration paid for the property herein described is \$36,000.00. The Grantees join this deed for the sole purpose of certifying the consideration pursuant to KRS 382.135, and for no other purpose express or implied.

IN TESTIMONY WHEREOF, witness the signature of the parties hereto the day and year as first written above.

GRANTORS:

Roy T. Blythe
ROY T. BLYTHE, single
Joyce Dean Valentine
JOYCE DEAN VALENTINE, single

GRANTEES:

Johnny Graves
JOHNNY GRAVES
Glaydell E. Graves
GLAYDELL GRAVES
Johnny Wayne Graves, Jr.
JOHNNY WAYNE GRAVES, JR.
David E. Graves
DAVID GRAVES.

STATE OF KENTUCKY
COUNTY OF MONROE

The foregoing deed and consideration certificate was acknowledged and sworn to before me by ROY T. BLYTHE, single and JOYCE DEAN VALENTINE, single, as Grantors, this the 15 day of September, 1995.

Sherry Cloud
NOTARY PUBLIC
MY COMMISSION EXPIRES: 12-23-95

STATE OF KENTUCKY
COUNTY OF MONROE

The foregoing consideration certificate was acknowledged and sworn to before
me by JOHNNY GRAVES and his wife, GLAYDELLE GRAVES, JOHNNY WAYNE
GRAVES, JR. and DAVID GRAVES, as Grantees, this the 15 day of September, 1995.

Carol C. Moore
NOTARY PUBLIC
MY COMMISSION EXPIRES: 6-12-97

THIS INSTRUMENT WAS PREPARED BY:

David Kelly Carter
DAVID KELLY CARTER
ATTORNEY AT LAW
108 EAST 3RD STREET
TOMPKINSVILLE, KY. 42167

LOGGED FOR RECORD
1995 SEP 15 PM 2:11
PATSY J. RICH
MONROE COUNTY CLERK

STATE OF KENTUCKY) SCT.
COUNTY OF MONROE)

I, Patsy J. Rich, County Court Clerk for the
County and state aforesaid, Certify: The foregoing
Deed lodged for record in my
office Sept. 15th 19 95 properly certified,
was duly recorded in my said office this 15th day
of Sept. 19 95. Given under my hand
as dated above Patsy J. Rich County Clerk
Time: 2:11 AM (PM)

67
Pl. 590
Pl. 600

DEED

THIS DEED OF CONVEYANCE, made and entered into this 22nd day of May, 1978, by and between HARVEY THOMAS PAGE and his wife, SANDRA PAGE, parties of the first part and JOHNNY GRAVES and his wife, GLAYDELL GRAVES, all of Monroe County, Kentucky, parties of the second part, with sole rights of survivorship; WITNESSETH: That said parties of the first part for and in consideration of the sum of ONE DOLLAR (\$1.00) and other good and valuable considerations, the receipt of which is hereby acknowledged, have bargained and sold, and by these presents do hereby bargain, sell and convey unto the said parties of the second part, the following described real estate located in Monroe County, Kentucky, to wit:

BEGINNING stone corner to Dixie Tooley & J. C. Tooley; thence S 57½ W 14 P to stake in Tompkinsville and Center Point Road, corner to J. C. Tooley; N 69½ W 10 P & 8½ feet to stone corner to J. C. Tooley, near J. C. Tooley's hen house; thence N 7½ E 2 P to stone corner to same; thence N 66 W 8 P to a stone, corner to same; thence S 7½ W 2 P to elm stump on road near light pole; thence N 82½ W 10 P to stake in road; thence N 37 W 10 P to stake on East side of road; thence N 16½ W 21 P to stone in Brince Tooley's line; thence N 9 E ___ P and 12 feet to small maple in Sarah Carter's line; thence with Carter's line N 51 E 9½ P to a large black oak stump in Carter's line; thence with same N 87 E 6 P to hickory corner to same; thence with same N 79 E 6 P to large black oak in Carter's line; thence S 57 E 26 P to mulberry corner to same; thence S 63 E 10 P to hickory corner to same and Dixie Tooley; thence S 8½ P to hickory in Dixie Tooley's line; thence S 11 E 15 P to small hickory corner to same; thence S 47 E 2 P to beginning, containing 20 acres, more or less.

BEGINNING on a stone in the Grider line; thence with the Grider line S 57 W 39 P to stake near road; thence with the road West 52 P to hickory corner to Tim Pitcock; thence S 38 W 12 P to hickory stump; corner to Meadows; thence with Meadows N 82 E 60 P to a stone with redbud pointer corner to Meadows; thence N 45 E 20 P to a stone corner to Brince Tooley and Meadows N 25 E 9 poles to the beginning, containing 8 acres, more or less.

BEING a portion of the same land conveyed to first parties by deed dated December 27, 1971, from Estie Strode and his wife, Opal Strode, and of record in Deed Book 42, page 490-491, records of the Monroe County Court Clerk's Office.

TO HAVE AND TO HOLD the above described real estate, together with the appurtenances thereto belonging, unto the said parties of the second part, for and during their joint lives with the remainder in fee simple to the survivor of them, his or her heirs and assigns forever, with Covenants of General Warranty.

IN TESTIMONY WHEREOF, witness hands of first parties the day and year first written above.

Harvey Thomas Page
HARVEY THOMAS PAGE

Sandra Page
SANDRA PAGE

STATE OF KENTUCKY
COUNTY OF MONROE

I, JOYCE HALE, Notary Public, in and for the state and county aforesaid, hereby certify that the foregoing instrument was on this day produced to me in my state and county by Harvey Thomas Page and his wife, Sandra Page, who duly acknowledged the execution of same to be their free act and deed.

Given under my hand this 22nd day of May, 1978.

Joyce Hale
JOYCE/HALE, Notary Public
Kentucky State at Large
My Commission Expires: 5-2-81

PREPARED BY:
DOUGLAS CARTER
ATTORNEY AT LAW
TOMMINSVILLE, KENTUCKY

Douglas Carter

STATE OF KENTUCKY }
MAY 25 '78 PM } COUNTY OF MONROE } SCT.



I, Freddie Tenley, County Court Clerk for and state aforesaid, Clerk: The foregoing deed lodged for record in my office on May 25, 1978, and duly recorded in my said office this 25th day of May, 1978. Given under my hand and seal this 25th day of May, 1978.
Freddie Tenley

**EXHIBIT K
NOTIFICATION LISTING**

Center Point Landowner Notice Listing

Johnny Graves et al
8475 Center Point Road
Tompkinsville, KY 42167

Johnnie G. Graves
8475 Center Point Road
Tompkinsville, KY 42167

Patricia Comer
8705 County House Road
Tompkinsville, KY 42167

Herman L. Johnson
1997 Old Glasgow Road
Tompkinsville, KY 42167

Willa Dean White
4673 Meshack Road
Tompkinsville, KY 42167

James Lee Elmore
1215 Hudgins Highway
Summersville, KY 42782-9019

Lucas & Valerie Geraldts
8585 Center Point Road
Tompkinsville, KY 42167

Stoney Martin
2229 Mt. Herman Road
Mt. Hermon, KY 42157

EXHIBIT L
COPY OF PROPERTY OWNER NOTIFICATION



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

**Notice of Proposed Construction of
Wireless Communications Facility
Site Name: Center Point**

Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 8721 Center Point Road, Tompkinsville, Kentucky (36°43'41.33" North latitude, 85°34'13.59" West longitude). The proposed facility will include a 195-foot tall antenna tower, plus a 4-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the Monroe County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the Kentucky Public Service Commission ("PSC"), either in writing or to request intervention in the PSC's proceedings on the application. You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2013-00435 in any correspondence sent in connection with this matter.

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

Sincerely,
David A. Pike
Attorney for AT&T Mobility

enclosure

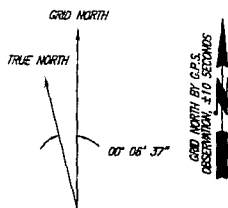
Driving Directions to Proposed Tower Site at Center Point

1. Beginning at the Monroe County Clerk's office, located at 200 North Main Street, Tompkinsville, KY 42167, head northeast on North Main Street towards 4th street.
2. Turn right onto E. 4th Street and travel approximately 325 feet.
3. Turn left onto N. Magnolia Street and travel approximately 0.8 miles.
4. Continue onto KY-100E/Center Point Road and travel for approximately 8.1 miles.
5. Destination is on the left.
6. The site coordinates are
 - a. North 36 deg 43' 41.33
 - b. West 85 deg 34'13.59

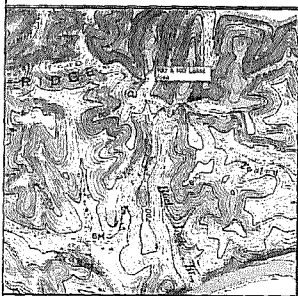


Prepared by:
Aaron L. Roof
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-3069
Telephone: 502-955-4400 or 800-516-4293

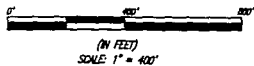
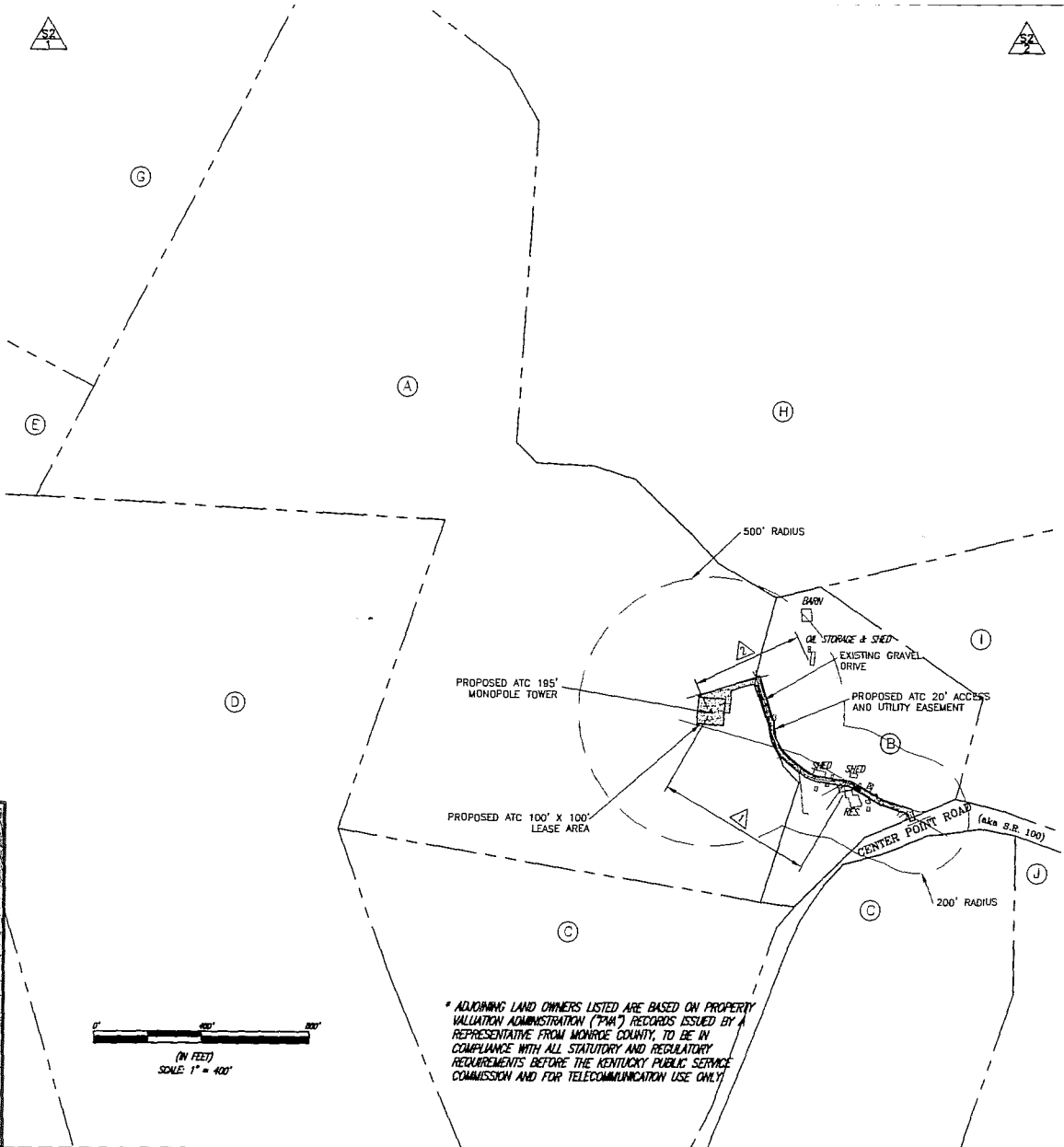
SHEET 1	
	- COUNTY AND 500' STRUCTURAL MAP
	- ABUTTING PROPERTY OWNERS
	- U.S.G.S. QUAD MAP
SHEET 2	
	- LEASE AREA
	- LEGAL DESCRIPTIONS
	- FLOOD ZONE DATA



NORTH IS BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM. SINGLE ZONE AND HKS DETERMINED BY COMPUTATION FROM G.P.S. OBSERVATION ON JUNE 19, 2013.



QUAD MAP
SCALE: 1" = 2000'
U.S.G.S. 7 1/2 MINUTE QUAD MAP OF (QUAD MAP NAME)



* ADJOINING LAND OWNERS LISTED ARE BASED ON PROPERTY VALUATION ADMINISTRATION ("PVA") RECORDS ISSUED BY REPRESENTATIVE FROM MONROE COUNTY, TO BE IN COMPLIANCE WITH ALL STATUTORY AND REGULATORY REQUIREMENTS BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION AND FOR TELECOMMUNICATION USE ONLY.



- (A) 77-17
JOHNNY GRAVES ET AL
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (B) 83-17
JOHNNIE G GRAVES
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SUMMERSVILLE, KY 42782
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LUCAS & VALERIE GERALDS
8585 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (J) 83-2D
STONEY MARTIN
2229 MT. HERMAN ROAD
MT. HERMON, KY 42157
NO ZONING

TOWER TO STRUCTURE DIST.	
	584' ±
	411' ±

AMERICAN TOWER CORPORATION

FSTan

Formerly P.S. Land & T. Alan Neal Company
Land Surveyors and Consulting Engineers
428 E. Woodland Street
Louisville, KY 40217
Phone: (502) 435-5886 (202) 836-5111
Fax: (502) 438-5223

SITE NUMBER:
AT&T SITE #144243/ATC #281329

SITE NAME:
CENTER POINT

SITE ADDRESS:
8721 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

LEASE AREA:
10,000 SQ.FT.

PROPERTY OWNER:
GRAVES, JOHNNY ET AL
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

PARCEL NUMBER:
77-17

PARCEL NUMBER:
83-17

SOURCE OF TITLE:
DEED 79, PAGE 871
DEED 50, PAGE 67

DWG BY: JAW	CHKD BY: FSSP	DATE: 06.22.13
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FSTAN PROJECT NO.:
13-8588

SHEET 1 OF 2

REVISIONS:
12-12-13 REVISED BORDER

DATE COMPILED: 08-21-13

ABUTTERS MAP

CENTER POINT
AT&T SITE #144243/ATC #281329
SITE ADDRESS: 8721 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
OWNER ADDRESS: 8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167

EXHIBIT M
COPY OF COUNTY JUDGE/EXECUTIVE NOTICE



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

VIA CERTIFIED MAIL

Hon. Tommy Willett
200 North Main Street
Tompkinsville, KY 42167

RE: Notice of Proposal to Construct Wireless Communications Facility
Kentucky Public Service Commission Docket No. 2013-00435
Site Name: Center Point

Dear Judge Willett:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 8721 Center Point Road, Tompkinsville, Kentucky 42167 (36°43'41.33" North latitude, 85°34'13.59" West longitude). The proposed facility will include a 195-foot tall antenna tower, plus a 4-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

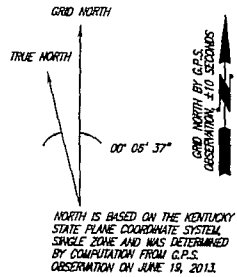
You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2013-00435 in any correspondence sent in connection with this matter.

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

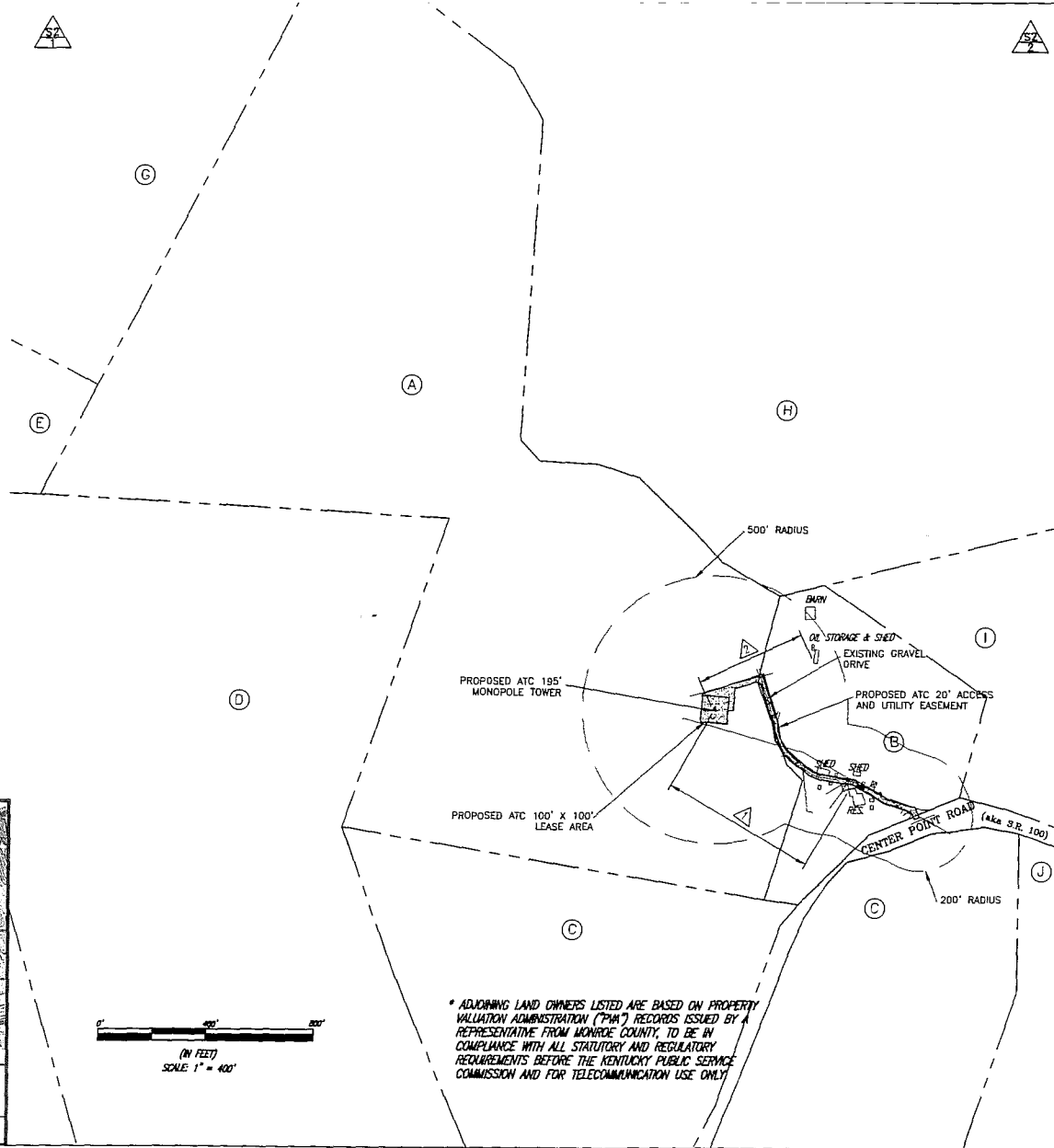
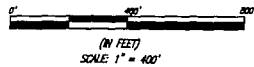
Sincerely,

David A. Pike
Attorney for AT&T Mobility
enclosure

SHEET 1	
	- VICINITY AND 500' STRUCTURAL MAP
	- ABUTTING PROPERTY OWNERS
	- U.S.G.S. QUAD MAP
SHEET 2	
	- LEASE AREA
	- LEGAL DESCRIPTIONS
	- FLOOD ZONE DATA



QUAD MAP
SCALE: 1"=2000'
U.S.G.S. 7 1/2 MINUTE QUAD MAP OF (QUAD MAP NAME)



* ADJOINING LAND OWNERS LISTED ARE BASED ON PROPERTY VALUATION ADMINISTRATION ("PVA") RECORDS ISSUED BY A REPRESENTATIVE FROM MONROE COUNTY, TO BE IN COMPLIANCE WITH ALL STATUTORY AND REGULATORY REQUIREMENTS BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION AND FOR TELECOMMUNICATION USE ONLY.



- (A) 77-17 JOHNNY GRAVES ET AL
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (B) 83-17 JOHNNIE G GRAVES
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (C) 83-18 PATRICIA COMER
8705 COUNTY HOUSE ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (D) 77-18 HERMAN L. JOHNSON
1997 OLD GLASGOW ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (E) 77-16 JOHNNIE G GRAVES
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (F) 83-17 JOHNNIE G GRAVES
8475 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (G) 77-11 WILLA OEAN WHITE
4673 MESHACK ROAD
TOMPKINSVILLE, KY 42167
ND ZONING
- (H) 77-09 JAMES LEE ELMORE
1215 HUGGINS HIGHWAY
SUMMERSVILLE, KY 42782
NO ZONING
- (I) 83-15 LUCAS & VALERIE GERALDS
8585 CENTER POINT ROAD
TOMPKINSVILLE, KY 42167
NO ZONING
- (J) 83-20 STONEY MARTIN
2229 MT. HERMAN ROAD
MT. HERMON, KY 42157
NO ZONING

TOWER TO STRUCTURE DIST.
584' ±
411' ±



SITE NUMBER:	AT&T SITE #144243/ATC #281329
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Driving Directions to Proposed Tower Site at Center Point

1. Beginning at the Monroe County Clerk's office, located at 200 North Main Street, Tompkinsville, KY 42167, head northeast on North Main Street towards 4th street.
2. Turn right onto E. 4th Street and travel approximately 325 feet.
3. Turn left onto N. Magnolia Street and travel approximately 0.8 miles.
4. Continue onto KY-100E/Center Point Road and travel for approximately 8.1 miles.
5. Destination is on the left.
6. The site coordinates are
 - a. North 36 deg 43' 41.33
 - b. West 85 deg 34' 13.59



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

EXHIBIT N
COPY OF POSTED NOTICES

SITE NAME: CENTER POINT
NOTICE SIGNS

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

New Cingular Wireless PCS, LLC d/b/a AT&T Mobility proposes to construct a telecommunications **tower** on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165 (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number Case No. 2013-00435 in your correspondence.

New Cingular Wireless PCS, LLC d/b/a AT&T Mobility proposes to construct a telecommunications **tower** near this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165 (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number Case No. 2013-00435 in your correspondence.

VIA TELEFAX: 270-786-4470

The Monroe County Citizen
Attn: Kathy Riddle
201 N. Main Street, Suite A
Tompkinsville, KY 42167

RE: Legal Notice Advertisement
Site Name: Center Point

Dear Ms. Riddle:

Please publish the following legal notice advertisement in the next edition of *The Monroe County Citizen*:

NOTICE

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 8721 Center Point Road, Tompkinsville, Kentucky 42167 (36°43'41.33" North latitude, 85°34'13.59" West longitude). You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2013-00435 in any correspondence sent in connection with this matter.

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

Sincerely,

Robert W. Grant
Pike Legal Group, PLLC

EXHIBIT O
COPY OF RADIO FREQUENCY DESIGN SEARCH AREA



Center Point Search Area