## Briggs Law Office, pac

December 8, 2010

## Via FedEx Overnight Delivery

## Kentucky Public Service Commission

## combed

## Attn: Linda Faulkner

Director, Division of Filings

## ute 092010

211 Sower Boulevard
Frankfort, KY 40602

## RE: Application to Construct Wireless Communications Facility Case Number: 2010-00435

Dear Ms. Faulkner,
On behalf of my client, New Cingular Wireless PCS, LLC, we are hereby submitting an original and five (5) copies of an Application for Certificate of Public. Convenience and Necessity to Construct a Wireless Communications Facility.

Please contact me if you require any further documentation or have any questions concerning this application.

Sincerely,


Todd R. Briggs
Counsel for New Singular Wireless PCS, LLC

Enclosures

## COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:
DEC 092010

APPLICATION OF NEW CINGULAR WIRELESS PCS, LLC ) FOR ISSUANCE OF A CERTIFICATE OF PUBLIC ) CONVENIENCE AND NECESSITY TO CONSTRUCT )
A WIRELESS COMMUNICATIONS FACILITY AT )CASE: 2010-00435 7330 STATE ROUTE 464, MAYFIELD )
GRAVES COUNTY, KENTUCKY, 42066 )
SITE NAME: BREWERS (EV3161)

## APPLICATION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A WIRELESS COMMUNICATIONS FACILITY

New Cingular Wireless PCS, LLC, a Delaware limited liability company, ("Applicant"), by counsel, pursuant to (i) KRS §§ 278.020, 278.040, 278.665 and the rules and regulations applicable thereto, and (ii) the Telecommunications Act of 1996, respectfully submits this Application requesting the issuance of a Certificate of Public Convenience and Necessity ("CPCN") from the Kentucky Public Service Commission ("PSC") to construct, maintain and operate a Wireless Communications Facility ("WCF") to serve the customers of the Applicant with wireless telecommunication services. In support of this Application, Applicant respectfully provides and states the following:

1. The complete name and address of the Applicant is: New Cingular Wireless PCS, LLC d/b/a AT\&T Mobility, a Delaware limited liability company having a local address of 601 West Chestnut Street, Louisville, Kentucky 40203.
2. Applicant is a Delaware limited liability company and copies of its Delaware Certificate of Formation and Certificate of Amendment are attached as Exhibit A. A copy of the Certificate of Authorization to transact business in the Commonwealth of Kentucky is also included as a part of Exhibit A.
3. Applicant proposes construction of an antenna tower in Graves County, Kentucky, in an area which is outside the jurisdiction of a planning commission and Applicant submits the Application to the PSC for a CPCN pursuant to KRS $\S \S 278.020(1), 278.650$, and 278.665. Graves County has one city independent planning commission--the City of Mayfield Planning Commission. The proposed WCF is not located within the jurisdictional boundaries of the City of Mayfield Planning Commission. This information was verified by the Office of the Graves County Judge Executive and the City of Mayfield Planning Commission.
4. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve the Applicant's services to an area currently not served or not adequately served by the Applicant by enhancing coverage and/or capacity and thereby increasing the public's access to wireless telecommunication services. A statement from Applicant's RF Design Engineer outlining said need is attached as Exhibit N. The WCF is an integral link in the Applicant's network design that must be in place to provide adequate coverage to the service area.
5. To address the above-described service needs, Applicant proposes to construct a WCF at 7730 State Route 464, Mayfield, Kentucky 42066 (36.71792 ${ }^{\circ}$ North Latitude, $88.51525^{\circ}$ West Longitude (NAD 83)), in an area entirely within Graves County. The property in which the WCF will be located is currently owned by Michael S. Adkison, pursuant to that Deed of record in Deed Book 427, Page 201 in the Office of the Graves County Clerk. The proposed WCF will consist of a 195 foot monopole with an approximately 4-foot tall lightning arrestor attached to the top of the tower for a total height of 199 feet. The WCF will also include concrete foundations to accommodate the placement
of a prefabricated equipment shelter. The WCF compound will be fenced and all access gate(s) will be secured. A detailed site development plan and survey, signed and sealed by a professional land surveyor registered in Kentucky is attached as Exhibit B.
6. A detailed description of the manner in which the WCF will be constructed is included in the site plan and a vertical tower profile signed and sealed by a professional engineer registered in Kentucky is attached as Exhibit C. Foundation design plans and a description of the standards according to which the tower was designed which have been signed and sealed by a professional engineer registered in Kentucky are attached as Exhibit D.
7. A geotechnical engineering report was performed at the WCF site by Environmental Corporation of America of Alpharetta, Georgia, dated November 8, 2010 and is attached as Exhibit E. The name and address of the geotechnical engineering firm and the professional engineer registered in Kentucky who prepared the report are included as part of Exhibit E.
8. A list of public utilities, corporations, and/or persons with whom the proposed WCF is likely to compete is attached as Exhibit F. Maps of suitable scale showing the location of the proposed WCF as well as the location of any like facilities owned by others located anywhere within the map area are also included in Exhibit F.
9. Filing with the Federal Aviation Administration ("FAA") is not necessary due to the height of the proposed tower. The Airspace Study is attached as Exhibit G. The Kentucky Airport Zoning Commission does not require a permit for the proposed tower. Verification from John Houlihan, Administrator for the Kentucky Airport Zoning Commission, is included as part of Exhibit G.
10. The Applicant operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable federal
requirements. Copies of the license(s) are attached as Exhibit H. The WCF has been designed, and will be built and operated in accordance with all applicable FCC and FAA regulations as indicated in the statement from Applicant's RF Design Engineer included as Exhibit N. Appropriate FCC required signage will be posted on the site.
11. Based on the review of Federal Emergency Management Agency Flood Insurance Rate Map, the licensed, professional land surveyor has noted in Exhibit B that the Flood Insurance Rate Map (FIRM) No. 21083C0275C dated December 3, 2009, indicates that the proposed WCF is not located within any flood hazard area.
12. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. Project Manager for the site is Chad Goughnour, of Nsoro, Inc.
13. Clear directions to the proposed WCF site from the county seat are attached as Exhibit $i$, including the name and telephone number of the preparer. A copy of the lease for the property on which the tower is proposed to be located is included as part of Exhibit I.
14. Applicant has notified, by certified mail, return receipt requested, every person of the proposed construction who, according to the records of the Graves County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or is contiguous to the site property. Applicant included in said notices the docket number under which the Application will be processed and informed each person of his or her right to request intervention. A list of the property owners who received notices along with the notices are attached as Exhibit J.
15. Applicant has notified the Graves County Judge Executive by certified mail, return receipt requested, of the proposed construction. The notice included the docket number under which the Application will be processed and
informed the Graves County Judge Executive of his right to request intervention. A copy of the notice is attached as Exhibit K.
16. Pursuant to 807 KAR 5:063, Applicant affirms that two notice signs measuring at least two feet by four feet in size with all required language in letters of required height have been posted in a visible location on the proposed site and on the nearest road. Copies of the signs are attached as Exhibit L. Such signs shall remain posted for at least two weeks after filing the Application. Notice of the proposed construction has been posted in a newspaper of general circulation in the county in which the construction is proposed (Mayfield Messenger)
17. The site of the proposed WCF is located in an undeveloped, rural area near Golo, Kentucky.
18. Applicant has considered the likely effects of the proposed construction on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate service to the area can be provided. Applicant carefully evaluated locations within the search area for co-location opportunities and found no suitable towers or other existing structures that met the requirements necessary in providing adequate service to the area. A statement from Applicant's RF Design Engineer is attached as Exhibit N. When suitable towers or structures exist, Applicant has attempted to co-locate on towers designed to host multiple wireless service providers' facilities or existing structures, such as a telecommunications tower or another suitable structure capable of supporting the Applicant's facilities.
19. A map of the area in which the proposed WCF is located, that is drawn to scale and that clearly depicts the search area in which a site should, pursuant to radio frequency requirements, be located is attached as Exhibit M.
20. Correspondence and communication with regard to this Application should be directed to:
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Todd R. Briggs
Briggs Law Office, PSC
1301 Clear Springs Trace
Suite 205
Louisville, KY 40223
(502) 412-9222
todd@briggslawoffice.net
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WHEREFORE, Applicant respectfully requests that the PSC accept the foregoing application for filing and enter an order granting a Certificate of Public Convenience and Necessity to Applicant for construction and operation of the proposed WCF and providing for such other relief as is necessary and appropriate.

Respectfully submitted,


Briggs Law Office, PSC
1301 Clear Springs Trace
Suite 205
Louisville, KY 40223
Telephone 502-412-9222
Counsel for New Cingular Wireless PCS, LLC
Mary K. Keyer
General Attorney
AT\&T Kentucky
601 W. Chestnut Street
Room 407
Louisville, KY 40203

## LIST OF EXHIBITS

| Exhibit A | Certificate of Authorization |
| :--- | :--- |
| Exhibit B | Site Development Plan and Survey |
| Exhibit C | Vertical Tower Profile |
| Exhibit D | Structural and Foundation Design Report |
| Exhibit E | Geotechnical Engineering Report |
| Exhibit F | Competing Utilities List and Map of Like Facilities, <br> General Area |
| Exhibit G | FAA Airspace Study <br> KAZC Documentation |
| Exhibit H | FCC Documentation |
| Exhibit I | Directions to Site and Copy of Lease Agreement |
| Exhibit J | Notification Listing and Copy of Property Owner <br> Notifications |
| Exhibit K | Copy of County Judge Executive Notice |
| Exhibit L | Copy of Posted Notices |
| Exhibit M | Map of Search Area |
| Exhibit N | RF Engineer Statements |

## Exhibit A

# Commonwealth of Kentucky Trey Grayson, Secretary of State 

| Trey Grayson |
| :---: | :---: |
| Secretary of State |
| P. O. Box 718 |
| Frankfort, KY 40602-0718 |
| (502) $564-3490$ |
| http:/mw.sos.ky.gov |$| \quad$ Certificate of Authorization

Authentication number: 104309
Visit http://apps.sos.ky.gov/business/obdb/certvalidate.aspx to authenticate this certificate.

I, Trey Grayson, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

## NEW CINGULAR WIRELESS PCS, LLC

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

I further certify that all fees and penalties owed to the Secretary of State have been paid; that an application for certificate of withdrawal has not been filed; and that the most recent annual report required by KRS 275.190 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this $30^{\text {th }}$ day of September, 2010, in the $219^{\text {th }}$ year of the Commonwealth.


Secretary of State
Commonwealth of Kentucky
104309/0481848

## Defraware

The First State

. I, HARRTEI SMITH MINDSOR, SECRETARY OF STATE OF THE STATE OF DELAHARE, DO HEREBY CERTTEY TKE ATTACHED IS A TRUE AND CORRECT COPY OF TGE CERTIFICATE OF AMENDMENT OF "AT\&T WIRELESS PCS, LLC", CHANGING ITS NAME FROM "ATGT WIRELESS PCS, ILC" TO "NEN CINGULAR WIRELESS PCS, LLLC", FILED IN THIS OEFICE ON THE TWENTY-SIXIH DAY OF OCTOBER, A.D. 200氏, AT 11:07 O'CLOCK A.M.

AND I DO HERERY EURTHER CERTIEY THAT THE EFFECTIUE DATE OF THE AEORESAID CERTIEICATE OF AMENDMENY IS THE TEENTY-SIXTH DAY OF OCTOBER, A.D. 2004, AT 7:30 O'CLOCK P.M.

24455448100
040770586


# State of Dalaware <br> Seanetery of State Divirian of corporations <br> Delivered 11:20 2M 10/26/2004 ETHSD 11:07 XX 10/26/2004 CERTITICATE OT AMENDMENTSRU 040770586-2445544 EIIE TO THE CERTIFICATE OF FORMATION <br> OF <br> AT\&T WIRELESS PCS, LLC 

1. The name of the limited liability company is ATET Wirelcss PCS, LLC (the "Company").
2. The Centificate of Formation of the Company is amended by deleting the first paragraph in its entirety and replacing it with a new first paragraph to read as follows:
"FIRST: The name of the limited liability company is New Cingular Wireless PCS, LLC."
3. The Certificale of Amendment shall be effective at 7:30 p.m. EDT on October 242004.
[Signature on following page]

EN WITNESS WHEREOF, AT\&T Wireless PCS, LLC has caused this Certificate of Amendment to be executed by its duly authorized Manager this 26th day of October, 2004.

## AT\&T WIRELESS PCS, LLC.

By: Cingular Wireless LLC, its Manager


## STATE OF DELAWARE

## CERTIFICATE OF FORMATION OF ATET WIRELESS PCS, LLC

The modersigned authorized person hereby executes the following Certificate of Formation for the purpose of forming a limiteri liability company nuder the Delaware Limited Liabillty Cormpary Act.

FHRST The name of the timited liability company is ATET Wizeless PCS LLC.

SECOND: Theaddress of its registered office in the State of Delaware is Corporation Trast Center, 1209 Orange Street, Wimoingron, Delaware 19801. The name of ifs registered agent at iuch address is The Corporalion Trust Company.

DATED this $\qquad$ day of September, 1999.

AT\&T WIKELBSS SERVICES, INC, As Authorized Person


Exhibit B




Exhibit C


## Exhibit D

# Structural Design Report <br> 195' Monopole located at: Brewers, KY 

## prepared for: NSORO MASTEC LLC by: Sabre Towers \& Poles ${ }^{\text {TM }}$

Job Number: 36901
Revision A
November 18, 2010
Monopole Profile. ..... 1
Foundation Design Summary (Option 1) ..... 2
Foundation Design Summary (Option 2). ..... 3
Pole Calculation ..... C1-C6
Foundation Calculations ..... A1-A13





## Customer: NSORO MASTEC LLC

Site: Brewers, KY
195' Monopole at
90 mph Wind with no ice and 30 mph Wind with 1 in . Ice per ANSI/TIA-222-G-2005.
Antenna L.oading per Page 1

Two (2) \#4 ties within top 5 " of concrete


ELEVATION VIEW
(63.62 Cu. Yds. each)
(1 REQUIRED; NOT TO SCALE)

Notes:
1). Concrete shall have a minimum 28-day compressive strength of 4000 PSI , in accordance with ACl 318-05.
2). Rebars to conform to ASTM specification A615 Grade 60.
3). All rebar to have a minimum of $3^{\prime \prime}$ concrete cover.
4). All exposed concrete corners to be chamfered $3 / 4^{\prime \prime}$.
5). The foundation design is based on the geotechnical report by ECA project no. L-1106 4, dated: 11/8/10
6). See the geotechnical report for drilled pier installation requirements, if specified.
7). The foundation is based on the following factored loads:
Moment (kip-ft) $=5685$
Axial $($ kips $)=75.9$
Shear $($ kips $)=41.5$

Rebar Schedule per Pier
Pier
(46) \#9 vertical rebar w/\#4 ties, two within top $5^{\prime \prime}$ of pier then $12^{\prime \prime} \mathrm{C} / \mathrm{C}$

Information contained herein is the sole property of Sabre Towers \& Poles, constitutes a trade secret as defined by lowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Towers \& Poles.

## Customer: NSORO MASTEC LLC

## Site: Brewers, KY

195' Monopole at 90 mph Wind with no ice and 30 mph Wind with 1 in. Ice per ANSI/TIA-222-G-2005. Antenna Loading per Page 1

Two (2) \#4 ties within top $5^{\prime \prime}$ of concrete


ELEVATION VIEW
(76.92 Cu. Yds. each)
(1 REQUIRED; NOT TO SCALE)

Notes:
1). Concrete shall have a minimum 28-day compressive strength of 4000 PSI , in accordance with ACl 318-05
2). Rebar to conform to ASTM specification A615 Grade 60.
3). All rebar to have a minimum of $3^{\prime \prime}$ concrete cover.
4). All exposed concrete corners to be chamfered 3/4".
5). The foundation design is based on the geotechnical report by ECA project no. L-1106-4, dated: 11/8/10
6). See the geotechnical report for compaction requirements, if specified.
7). The foundation is based on the following factored loads:
Moment (kip-ft) $=5685$
Axial (kips) $=75.9$
Shear $(\mathrm{kips})=41.5$


| Rebar Schedule per Pad and Pier |  |
| :---: | :---: |
| Pier | (46) \#9 vertical rebar w/hooks at bottom <br> w/\#4 ties, two within top 5" of top of pier then <br> $12^{\prime \prime} \mathrm{C} / \mathrm{C}$ |
| Pad | (31) \#8 honizontal rebar evenly spaced each <br> way top and bottom (124 Total) |

Information contained herein is the sole property of Sabre Towers \& Poles, constitutes a trade secret as defined by lowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Towers \& Poles

| TOP | DIAMETER | 34.00 in | 34.52 in. Point-Point] |
| :---: | :---: | :---: | :---: |
| BOTTOM | DIAMETER | 67.61 in . | 68.65 in. Point-Point] |
| POLE | HEIGHT | 194.00 ft . | 18 SIDED ELAT ORIEN |
| BASE | HEIGHT | 1.00 ft | ABOVE GROUND |
| E-MOD |  | 29000 ks | 12000 ksi SHEAR MOD |

APPURTENANCES
$\begin{array}{lccc}\text { ATTACH POINTS: } & \text { NO. } & x, \text { ft } & \text { Qty } \\ & 1 & 192.00 & 2 \\ & 2 & 179.00 & 2 \\ & 3 & 164.00 & 2\end{array}$
Description
Pipe Mount $\left(8^{\prime}-10^{\prime}\right.$ Dishes)
pipe Mount ( $8,-10$, Dishes)
Pipe Mount ( $8^{\prime}-10^{\prime}$ Dishes)

Status
Initial Appurt Future Appurt. Future Appurt

Some wind forces may have been derived from full-scale wind tunnel tests.

| Pole Section | Bottom X, ft | Thick in. | Connect Type | $\begin{aligned} & \hline \text { LAP } \\ & \text { in. } \end{aligned}$ | Taper <br> in/ft | Length ft. | Weight 1bs | Steel Spec | $\begin{gathered} \text { Pole } \\ \text { Finish } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 14.50 | . 25000 | SLIP-JNT | 63. | . 1900 | 14.50 | 1375 | A572-65 | GALVANIZE |
| 2 | 55.75 | . 37500 | SLIP--JNT | 75. | . 1900 | 46.50 | 7401 | A572-65 | GALVANIZE |
| 3 | 103.00 | . 50000 | SLIP-JNT | 87. | . 1900 | 53.50 | 13502 | A572-65 | GALVANIZE |
| 4 | 149.25 | . 50000 | SLIP--JNT | 99. | . 1900 | 53.50 | 15752 | A572-65 | GALVANIZE |
| 5 | 194.00 | . 50000 | C-WELD |  | . 1900 | 53.00 | 17765 | A 572-65 | Special |

SECTION PROPERTIES

| X, ft | UP, ft | D. in | T, in | Area $\mathrm{in}^{2}$ | $\begin{aligned} & \text { Iz } \\ & \text { in }^{4} \end{aligned}$ | $\begin{aligned} & \text { TxTy } \\ & i n^{4} \end{aligned}$ | $\begin{aligned} & \text { Sxsy } \\ & i n^{3} \end{aligned}$ | w/t | d/t | $\mathrm{F}_{\mathrm{y}}(\mathrm{ksi})$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 194.00 | 00 | 34.00 | 2500 | 26.78 | 7706 | 3853 | 223.2 | 22.22 | 136.0 | 65.00 | TOP |
| 192.00 | 2.00 | 34.38 | . 2500 | 27.08 | 7968 | 3984 | 228.2 | 22.49 | 137.5 | 65.00 | P01 |
| 187.00 | 7.00 | 35.33 | . 2500 | 27.83 | 8654 | 4327 | 241.2 | 23.16 | 141.3 | 65.00 |  |
| 184.75 | 9.25 | 35.76 | . 2500 | 28.17 | 8972 | 4486 | 247.1 | 23.46 | 143.0 | 65.00 65.00 | Slip-B01 |
| 179.75 179.50 | 14.25 | 36.21 36.26 | .3750 .3750 | 42.65 | 13832 13888 | 6916 | 376.2 377.2 | 15.26 15.28 | 96.6 96.7 | 65.00 65.00 | Slip-T02 |
| 179.00 | 15.00 | 36.35 | . 3750 | 42.82 | 13998 | 6999 | 379.2 | 15.33 | 96.9 | 65.00 | P02 |
| 174.00 | 20.00 | 37.30 | . 3750 | 43.95 | 15138 | 7569 | 399.7 | 15.78 | 99.5 | 65.00 |  |
| 169.00 | 25.00 | 38.25 | . 3750 | 45.08 | 16336 | 8168 | 420.6 | 16.22 | 102.0 | 65.00 |  |
| 164.00 | 30.00 | 39.20 | . 3750 | 46.21 | 17596 | 8798 | 442.1 | 16.67 | 104.5 | 65.00 | P03 |
| 159.00 | 35.00 | 40.15 | . 3750 | 47.34 | 18920 | 9460 | 464.1 | 17.12 | 107.1 | 65.00 |  |
| 154.00 | 40.00 | 41.10 | . 3750 | 48.47 | 20308 | 10154 | 486.6 | 17.56 | 109.6 | 65.00 |  |
| 149.00 | 45.00 | 42.05 | . 3750 | 49.60 | 21762 | 10881 | 509.7 | 18.01 | 112.1 | 65.00 |  |
| 144.50 | 49.50 | 42.91 | . 3750 | 50.62 | 23130 | 11565 | 530.9 | 18.41 | 114.4 | 65.00 65.00 | Slip-B02 |
| 139.50 138.25 | 54.50 55.75 | 43.11 43.34 | .5000 .5000 | 67.61 67.99 | 31004 31526 | 15502 15763 | 708.3 | 13.44 13.52 | 86.2 86.7 | 65.00 65.00 | Slip-T03 |
| 133.25 | 60.75 | 44.29 | . 5000 | 69.50 | 33668 | 16834 | 748.6 | 13.86 | 88.6 | 65.00 |  |
| 128.25 | 65.75 | 45.24 | . 5000 | 71.00 | 35908 | 17954 | 781.6 | 14.19 | 90.5 | 65.00 |  |
| 123.25 | 70.75 | 46.19 | . 5000 | 72.51 | 38244 | 19122 | 815.3 | 14.53 | 92.4 | 65.00 |  |
| 118.25 | 75.75 | 47.14 | . 5000 | 74.02 | 40678 | 20339 | 849.8 | 14.86 | 94.3 | 65.00 |  |
| 113.25 | 80.75 | 48.09 | . 5000 | 75.53 | 43216 | 21608 | 884.9 | 15.20 | 96.2 | 65.00 |  |
| 108.25 | 85.75 | 49.04 | . 5000 | 77.03 | 45856 | 22928 | 920.8 | 15.53 | 98.1 | 65.00 |  |
| 103.25 | 90.75 | 49.99 | . 5000 | 78.54 | 48602 | 24301 | 957.4 | 15.87 | 100.0 | 65.00 |  |
| 98.25 | 95.75 | 50.94 | . 5000 | 80.05 | 51452 | 25726 | 994.7 | 16.20 | 101.9 | 65.00 | Slip-B03 |
| 93.25 | 100.75 | 50.89 | . 5000 | 79.97 | 51300 | 25650 | 992.7 | 16.18 | 101.8 | 65.00 |  |
| 91.00 | 103.00 | 51.32 | . 5000 | 80.65 | 52616 | 26308 | 1009.7 | 16.33 | 102. 6 | 65.00 | Slip-T04 |
| 86.00 | 108.00 | 52.27 | . 5000 | 82.16 | 55622 | 27811 | 1048.0 | 16.67 | 104.5 | 65.00 |  |
| 81.00 | 113.00 | 53.22 | . 5000 | 83.66 | 58742 | 29371 | 1087.0 | 17.00 | 106.4 | 65.00 |  |
| 76.00 | 118.00 | 54.17 |  | 85.17 | 61974 | 30987 | 1126.7 |  | 108.3 | 65.00 |  |
| 71.00 | 123.00 | 55.12 | . 5000 | 86.68 | 65324 | 32662 | 1167.1 | 17.68 | 110.2 | 65.00 |  |
| 66.00 61.00 | 128.00 133.00 | 56.07 57.02 | .5000 .5000 | 88.19 89.69 | 68792 72380 | 34396 36190 | 1208.3 | 18.01 18.35 | 1112.1 |  |  |
| 61.00 56.00 | 133.00 138.00 | 57.02 57.97 | .5000 .5000 | 89.69 91.20 | 72380 76090 | 36190 38045 | 1250.1 | 18.35 18.68 | 11.4 | 65.00 65.00 |  |
| 53.00 | 141.00 | 58.54 | .5000 | 92.11 | 78378 | 39189 | 1318.5 | 18.88 | 117.1 | 65.00 | Slip-B04 |
| 48.00 | 146.00 | 58.49 | . 5000 | 92.03 | 78176 | 39088 | 1316.3 | 18.86 | 117.0 | 65.00 |  |
| 44.75 | 149.25 | 59.11 | . 5000 | 93.01 | 80700 | 40350 | 1344.6 | 19.08 | 118.2 | 65.00 | Slip-T05 |
| 39.75 | 154.25 | 60.06 | . 5000 | 94.51 | 84688 | 42344 | 1388.7 | 19.42 | 120.1 | 65.00 |  |
| 34.75 | 159.25 | 61.01 | . 5000 | 96.02 | 88804 | 44402 | 1433.5 | 19.75 | 122.0 | 65.00 |  |
| 29.75 | 164.25 | 61.96 | . 5000 | 97.53 | 93054 | 46527 | 1479.1 | 20.09 | 123.9 | 65.00 |  |
| 24.75 | 169.25 | 62.91 | . 5000 | 99.04 | 97434 | 48117 | 1525.3 | 20.42 | 125.6 | 65.00 |  |
| 19.75 | 174.25 | 63.86 | . 5000 | 100.54 | 101952 | 50976 | 1572.3 | 20.76 | 127.7 | 65.00 |  |
| 14.75 | 179.25 | 64.81 | 5000 | 102.05 | 106508 | 53304 | 1620.0 | 21.09 | 129.6 | 65.00 |  |
| 9.75 | 184.25 | 65.76 | . 5000 | 103.56 | 111402 | 55701 | 1668.4 | 21.43 | 131.5 | 65.00 |  |
| 4.75 .00 | 189.25 194.00 | 66.71 67.61 | .5000 .5000 | 105.07 106.50 | 116340 | 58170 60581 | 1717.5 | 21.76 22.08 | 133.4 135.2 | 65.00 65.00 | BASE |

IASE - 1: 3s Gusted Wind



| X. ft |
| ---: |
| 194.00 |
| 192.00 |
| 187.00 |
| 184.75 |
| 179.75 |
| 179.50 |
| 179.00 |
| 174.00 |
| 169.00 |
| 164.00 |
| 159.00 |
| 154.00 |
| 149.00 |
| 144.50 |
| 139.50 |
| 138.25 |
| 133.25 |
| 128.25 |
| 123.25 |
| 118.25 |
| 113.25 |
| 108.25 |
| 103.25 |
| 98.25 |
| 93.25 |
| 91.00 |
| 86.00 |
| 81.00 |
| 76.00 |
| 71.00 |
| 66.00 |
| 61.00 |
| 56.00 |
| 53.00 |
| 48.00 |
| 44.75 |
| 39.75 |
| 34.75 |
| 29.75 |
| 24.75 |
| 19.75 |
| 14.75 |
| 9.75 |
| 4.75 |


|  | WIND |
| :---: | :---: |
| Kzt | psf |
| 1.00 | 32.83 |
| 1.00 | 32.76 |
| 1.00 | 32.58 |
| 1.00 | 32.49 |
| 1.00 | 32.31 |
| 1.00 | 32.30 |
| 1.00 | 32.28 |
| 1.00 | 32.09 |
| 1.00 | 31.89 |
| 1.00 | 31.69 |
| 1.00 | 31.49 |
| 1.00 | 31.28 |
| 1.00 | 31.06 |
| 1.00 | 30.86 |
| 1.00 | 30.64 |
| 1.00 | 30.58 |
| 1.00 | 30.35 |
| 1.00 | 30.10 |
| 1.00 | 29.86 |
| 1.00 | 29.60 |
| 1.00 | 29.33 |
| 1.00 | 29.06 |
| 1.00 | 28.77 |
| 1.00 | 28.48 |
| 1.00 | 28.17 |
| 1.00 | 28.03 |
| 1.00 | 27.70 |
| 1.00 | 27.35 |
| 1.00 | 26.99 |
| 1.00 | 26.62 |
| 1.00 | 26.22 |
| 1.00 | 25.79 |
| 1.00 | 25.34 |
| 1.00 | 25.05 |
| 1.00 | 24.54 |
| 1.00 | 24.19 |
| 1.00 | 23.61 |
| 1.00 | 22.97 |
| 1.00 | 22.25 |
| . 00 | 21.44 |
| 1.00 | 20.48 |
| 1.00 | 19.33 |
| 1.00 | 19.16 |
| 1.00 | 19.16 |
| 1.00 | 19.16 |

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| : --- FORCES, kip |  |
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| IShearX | ShearY |
| . 0 | . 01 |
| . 0 | 6.95 |
| 0 | 7.43 |
| 0 | 7.83 |
| 0 | 8.13 |
| . 0 | 8.17 |
| . 0 | 14.95 |
| . 0 | 15.51 |
| . 0 | 16.08 |
| . 0 | 23.00 |
| . 0 | 23.58 |
| . 0 | 24.17 |
| . 0 | 24.74 |
| . 0 | 25.34 |
| . 0 | 25.74 |
| . 0 | 26.15 |
| . 0 | 26.79 |
| . 0 | 27.41 |
| .0 | 28.03 |
| . 0 | 28.66 |
| . 0 | 29.28 |
| . 0 | 29.91 |
| . 0 | 30.55 |
| . 0 | 31.21 |
| . 0 | 31.67 |
| - 0 | 32.13 |
| . 0 | 32.74 |
| . 0 | 33.33 |
| . 0 | 33.92 |
| . 0 | 34.50 |
| . 0 | 35.07 |
| . 0 | 35.64 |
| . 0 | 36.09 |
| . 0 | 36.55 |
| . 0 | 37.00 |
| . 0 | 37.43 |
| . 0 | 37.94 |
| . 0 | 38.42 |
| . 0 | 38.89 |
| . 0 | 39.35 |
| . 0 | 39.82 |
| . 0 | 40.29 |
| . 0 | 40.76 |
| . | 41.21 |
| 0 | 41.47 |




Sabre Areas

DISPLLACEMENTS



## RESULTS

X, ft
194.00
192.00
187.00
184.75
179.75
179.50
179.00
174.00
169.00
164.00
159.00
154.00
149.00
144.50
139.50
138.25
133.25
128.25
123.25
118.25
113.25
108.25
103.25
98.25
93.25
91.00
86.00
81.00
76.00
71.00
666.00
61.00
56.00
53.00
48.00
44.75
39.75
34.75
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4

|  |  |  |
| :---: | :---: | :---: |
|  | WIND | ICE |
| Kzt | pSf | in |
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| 1.00 | 32.28 | .00 |
| 1.00 | 32.09 | .00 |
| 1.00 | 31.89 | .00 |
| 1.00 | 31.69 | .00 |
| 1.00 | 31.49 | .00 |
| 1.00 | 31.28 | .00 |
| 1.00 | 31.06 | .00 |
| 1.00 | 30.86 | .00 |
| 1.00 | 30.64 | .00 |
| 1.00 | 30.58 | .00 |
| 1.00 | 30.35 | .00 |
| 1.00 | 30.10 | .00 |
| 1.00 | 29.86 | .00 |
| 1.00 | 29.60 | .00 |
| 1.00 | 29.33 | .00 |
| 1.00 | 29.06 | .00 |
| 1.00 | 28.77 | .00 |
| 1.00 | 28.48 | .00 |
| 1.00 | 28.17 | .00 |
| 1.00 | 28.03 | .00 |
| 1.00 | 27.70 | .00 |
| 1.00 | 27.35 | .00 |
| 1.00 | 26.99 | .00 |
| 1.00 | 26.62 | .00 |
| 1.00 | 26.22 | .00 |
| 1.00 | 25.79 | .00 |
| 1.00 | 25.34 | .00 |
| 1.00 | 25.05 | .00 |
| 1.00 | 24.54 | .00 |
| 1.00 | 24.19 | .00 |
| 1.00 | 23.61 | .00 |
| 1.00 | 22.97 | .00 |
| 1.00 | 22.25 | .00 |
| 1.00 | 21.44 | .00 |
| 1.00 | 20.48 | .00 |
| 1.00 | 19.33 | .00 |
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| 1.00 | 19.16 | .00 |
| 1.00 | 19.16 | .00 |
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She, kip
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7.75
8.04
8.08
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4.48

5. | APS | -MOMENI |
| :---: | :---: |
| -1.1 | BendX |
| -1.9 | -13.0 |
| -2.2 | -48.0 |
| -2.7 | -64.5 |
| -3.2 | -103.3 |
| -3.2 | -105.3 |
| -5.1 | -109.3 |
| -5.7 | -183.3 |
| -6.4 | -260.2 |
| -8.6 | -339.7 |
| -9.3 | -453.5 |
| -10.1 | -570.3 |
| -11.0 | -689.8 |
| -12.2 | -800.0 |
| -13.1 | -925.0 |
| -14.1 | -957.5 |
| -15.5 | -1086.7 |
| -16.6 | -1218.3 |
| -17.8 | -1354.2 |
| -19.0 | -1492.5 |
| -20.2 | -1634.2 |
| -21.4 | -1778.3 |
| -23.0 | -1926.7 |
| -24.9 | -2077.5 |
| -26.2 | -2230.8 |
| -27.6 | -2301.7 |
| -29.3 | -2460.0 |
| -30.6 | -2621.7 |
| -32.0 | -2786.7 |
| -33.4 | -2954.2 |
| -34.8 | -3125.0 |
| -36.3 | -3298.3 |
| -37.7 | -3475.0 |
| -39.4 | -3582.5 |
| -41.2 | -3763.3 |
| -43.1 | -3882.5 |
| -45.0 | -4068.3 |
| -46.5 | -4256.7 |
| -48.1 | -4447.5 |
| -49.7 | -4640.8 |
| -51.4 | -4836.7 |
| -53.0 | -5035.0 |
| -54.7 | -5235.8 |
| -56.4 | -5439.2 |
| -57.1 | 5635.0 | $\begin{array}{r}--M O M E N \\ \text { BendX } \\ -13.0 \\ -48.0 \\ -64.5 \\ -103.3 \\ -105.3 \\ -109.3 \\ -183.3 \\ -260.2 \\ -339.7 \\ -453.5 \\ -570.3 \\ -689.8 \\ -800.0 \\ -925.0 \\ -957.5 \\ -1086.7 \\ -1218.3 \\ -1354.2 \\ -1492.5 \\ -1634.2 \\ -1778.3 \\ -1926.7 \\ -2077.5 \\ -2230.8 \\ -2301.7 \\ -2460.0 \\ -2621.7 \\ -2786.7 \\ -2954.2 \\ -3125.0 \\ -3298.3 \\ -3475.0 \\ -3582.5 \\ -3763.3 \\ -3882.5 \\ -4068.3 \\ -4256.7 \\ -4447.5 \\ -4640.8 \\ -4836.7 \\ -5035.0 \\ -5235.8 \\ -5439.2 \\ 5635.0 \\ \hline\end{array}$ Bé




Tor orqz NO,00000000000000000000000000,0000000000000000000.

 Inter 4.8 .2




AASE - 3: 3s Gusted Wind\&Ice



RESUITIS

|  |  | WIND | ICE |  | CES |  |  | $T S, \mathrm{ft}$ |  |  | Inter |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| X, ft | Kzt | pSf | $\begin{aligned} & \text { ing } \\ & \text { in } \end{aligned}$ | ishearx | Shear | Axiaz | BendX | Bendy | Torqzi | $\mathrm{k}_{5} 5 \frac{1}{2}$ | $4.8 .2$ |
| 194.00 | 1.00 | 4.21 | 2.39 | . 0 | . 00 |  | - 0 | - 0 | . 0 | 75.25 | 000 |
| 192.00 | 1.00 | 4.20 | 2.39 | . 0 | . 53 | -3.6 | - -9 | 0 | 0 |  | 005 |
| 187.00 | 1.00 | 4.18 | 2.38 | . 0 | . 60 | -4.5 | -3.6 | - | - 0 | 74.14 | 007 |
| 184.75 | 1.00 | 4.17 | 2.38 | 0 | . 65 | $-5.6$ | -5.0 | 0 | . 0 | 82.55 | 006 |
| 179.75 | 1.00 | 4.14 | 2.37 | 0 | . 70 | -6.4 | -8.3 | . 0 | . 0 | 82.55 | 006 |
| 179.50 | 1.00 | 4.14 | 2.37 | 0 | 1.70 | -6.5 | -8.4 | . 0 | . 0 | 82.55 | 007 |
| 179.00 174.00 | 1.00 1.00 | 4.14 4.11 | 2.37 2.36 | . 0 | 1.30 | -11.4 | -14.9 | 0 | . 0 | 82.55 | 009 |
| 169.00 | 1.00 | 4.09 | 2.36 | 0 | 1.38 | -12.9 | -21.3 | 0 | - 0 | 82.30 | 012 |
| 164.00 | 1.00 | 4.06 | 2.35 | . 0 | 1.92 | -16.9 | -28.2 | . 0 | . 0 | 81.78 | 015 |
| 159.00 | 1.00 | 4.04 | 2.34 | . 0 | 2.00 | -18.5 | -37.8 | . 0 | . 0 | 81.25 | 019 |
| 154.00 | 1.00 | 4.01 | 2.33 | . 0 | 2.09 | -20.1 | -47.8 | . 0 | . 0 | 80.73 | 022 |
| 149.00 | 1.00 | 3.98 | 2.33 | . 0 | 2.17 | -21.9 | -58.2 | . 0 | - 0 | 80.20 | 025 |
| 144.50 | 1.00 | 3.96 | 2.32 | . 0 | 2.25 | -24.1 | -68.0 | . 0 | - 0 | 79.73 | . 028 |
| 139.50 | 1.00 | 3.93 | 2.31 | . 0 | 2.31 | -25.6 | -79.3 | . 0 | . 0 | 82.55 | . 023 |
| 138.25 | 1.00 | 3.92 | 2.31 | . 0 | 2.37 | -27.3 | -82.1 | . 0 | - 0 | 82.55 | . 024 |
| 133.25 | 1.00 | 3.89 | 2.30 | - 0 | 2.46 | -29.7 | -94.0 | . 0 | - 0 | 82.55 | . 026 |
| 128.25 | 1.00 | 3.86 | 2.29 | - 0 | 2.54 | -31.9 | -106.3 | - 0 | 0 | 82.55 | . 038 |
| 123.25 | 1.00 | 3.83 | 2.28 | - 0 | 2.63 | -34.0 | -119.2 | . 0 | -0 | 82.55 | . 032 |
| 118.25 | 1.00 | 3.79 | 2.27 | - 0 | 2.72 2.81 | -36.2 | -132.2 | . 0 | -0 | 82.55 | . 033 |
| 113.25 | 1.00 | 3.76 | 2.26 | - 0 | 2.81 2.90 | --38.5 | -145.8 | . 0 | -0 | 82.55 | . 035 |
| 108.25 | 1.00 | 3.73 3.69 | 2.25 2.24 | -0 | 2.90 2.99 | -43.8 | -174.3 | .0 | - 0 | 82.55 | . 037 |
| 103.25 98.25 | 1.00 1.00 | 3.69 3.65 | 2.23 2.23 | -0 | 3.08 | -46.7 | -189.2 | . 0 | . 0 | 82.33 | . 039 |
| 93.25 | 1.00 | 3.61 | 2.22 | . 0 | 3.14 | -49.0 | $-204.6$ | . 0 | . 0 | 82.35 | 042 |
| 91.00 | 1.00 | 3.59 | 2.22 | . 0 | 3.21 | -51.3 | -211.7 | . 0 | . 0 | 82.17 | . 043 |
| 86.00 | 1.00 | 3.55 | 2.20 | . 0 | 3.29 | $-54.1$ | $-227.7$ | . 0 | - | 81.78 | 044 |
| 81.00 | 1.00 | 3.51 | 2.19 | . 0 | 3.37 | -56.6 | -244.2 | . 0 | - | 81.38 | . 046 |
| 76.00 | 1.00 | 3.46 | 2.18 | . 0 | 3.45 | $-59.1$ | -261.0 | - 0 | 0 | 80.95 | . 049 |
| 71.00 | 1.00 | 3.41 | 2.16 | . 0 | 3.54 | -61.6 | -278.3 | -0 |  |  | 049 |
| 66.00 | 1.00 | 3.36 | 2.15 | - 0 | 3.62 | -64.2 | -296.0 -314.1 | -0 | . 0 | 79.80 | . 052 |
| 56.00 53.00 | 1.00 | 3.21 | 2.10 | . 0 | 3.82 | -72.1 | -343.8 | . 0 | 0 | 79.17 | 055 |
| 48.00 | 1.00 | 3.15 | 2.08 | . 0 | 3.88 | -75.1 | -362.9 | - 0 | - | 79.19 | 058 |
| 44.75 | 1.00 | 3.10 | 2.07 | . 0 | 3.94 | -78.1 | -375.5 | . 0 | . 0 | 78.94 | 059 |
| 39.75 | 1.00 | 3.03 | 2.04 | . 0 | 4.01 | -81.3 | -395.3 | . 0 | 0 | 78.54 | 060 |
| 34.75 | 1.00 | 2.94 | 2.02 | . 0 | 4.08 | -84.0 | -415.3 | . 0 | 0 | 78.15 | 062 |
| 29.75 | 1.00 | 2.85 | 1.99 | . 0 | 4.14 | -86.8 | -435.8 | . 0 | 0 | 77.75 | 063 |
| 24.75 | 1.00 | 2.75 | 1.95 | 0 | 4.21 | -89.6 | $-456.4$ | . 0 | 0 | 77.36 | 065 |
| 19.75 | 1.00 | 2.63 | 1.91 | - 0 | 4.27 | -92.5 | -477.5 | - 0 | 0 | 76.97 76.57 | . 066 |
| 14.75 9.75 | 1.00 1.00 | 2.48 | - 1.86 | -0 | 4.34 4.40 | -95.3 | -498.8 -520.5 | . 0 | . 0 | 76.18 | . 068 |
| 4.75 | 1.00 | 2.46 | 1.6B | -0 | 4.46 | -101.0 | -542.5 | . 0 | . 0 | 75.78 | . 070 |
| . 00 | 1.00 | 2.46 | 1.41 | . 0 | 4.49 | -102.0 | 563.7 | . 0 | . 0 | 75.41 | . 071 |

DISPLACEMENTS
IASE - 4: Service Loads ANSI-TIA-222-G

| WIND OLE |  | 1.00 |  | GUSTED WIND (3sec) | 60.0 mph | 96.6 kph |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| VERTICAL OLE |  | 1.00 |  | EXP-CAT/STROC CLASS | C-IT |  |
| DESIGN ICE |  | 00 | in | EXP-POWER COEFE. | 2105 |  |
| GUST FACTOR | (Gh) | 1.10 |  | REFERENCE HEIGHT | 900.0 ft |  |
| FORCE COEFF | (Cf) | 65 |  | PRESSURE 32.7 ft | 8.6 psf | 412.3 Pa |
| IMPORTANCE FAC | (I) | 1.00 |  | BASE ABOVE Grd | 1.0 |  |
| DIRECTION FAC | (Kd) | . 85 |  | CREST HEIGHT | . 0 ft |  |


| LPPURTENAN |
| :--- |
| \# Qty Des |
| 12 |
| 2 |
| 2 |
| 2 |

DISPIACEMENTS

SHAPE: 18 SIDED POLYGON with FLAT-FLAT ORIENTATION
BOLTS: QUADRANT SPACED BOLTS
6.00 in. ON CENTER

LOCATE:
POLE DATA

DESIGN CASE $=13 \mathrm{~s}$ Gusted Wind
Design: ANY Orientation Reactions at 45.00 deg to X-AXIS
BOLT LOADS


| A615 $:=:$ ANCHOR BOLT DESIGN USED |  |  |  |  |
| ---: | :---: | ---: | :--- | :--- |
| 16 Bolts on a | 74.750 | in. Bolt Circle | SHIP |  |
| 2.250 | in. Diameter | 67.13 in. Embedded | (lbs) |  |
| 12.00 in. Exposed | 84.00 | in. Total Length | 2225 |  |

CONCRETE - Fc= 4000 psi
ANCHOR BOLTS are STRAIGHT w UPLIET NUT

## BASE PLATE



## BASE PLATE USED

| 2.75 | in. | THICK | SHIP |
| ---: | :--- | :--- | :--- |
| 71.75 | in. | SQUARE | $(1 b s)$ |
| 55.00 | in. | CENTER HOLE | 1780 |

IOAD CASE SUMMARY


LPILE Plus for windows, version 5.0 (5.0.39)
Analysis of Individual Piles and Drilled Shafts Subjected to Lateral Loading Using the $p-y$ Method
(c) 1985-2007 by Ensoft, Inc. A11 Rights Reserved

This program is licensed to:
Rob Beacom
Sabre Towers and Poles
Path to file locations:
Name of input data file:
Name of output file:
C:\Progra~1\Ensoft\LpileP5\}
3636901P.7po
Name of plot output file: 3636901p.1pp
Name of runtime file: 3636901p.7pr

Time and Date of Analysis

Date: November 18, 2010 Time: 10:38:27

Problem Title
$195^{\circ}$ Monopole NSORO MASTEC LLC Brewers, KY (36901) 11-18-10 REB

Program Options

Units Used in Computations - US Customary Units: Inches, Pounds
Basic Program Options:
Analysis Type 3:

- Computation of Nonlinear Bending Stiffness and U7timate Bending moment Capacity with Pile Response Computed Using Nonlinear EI

Computation Options:

- only internally-generated p-y curves used in analysis
- Analysis does not use p-y multipliers (individual pile or shaft action only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output summary table of values for pile-head deflection, maximum bending moment, and shear force only
- Analysis assumes no soil movements acting on pile
- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:

- Number of pile increments $=\quad 100$
- Maximum number of iterations allowed $=\quad 300$
- Deflection tolerance for convergence $=1.0000 \mathrm{E}-05$ in
- Maximum allowable deflection

Printing options:

- Only summary tables of pile-head deflection, maximum bending moment, and maximum shear force are to be printed in output file.

Pile structural properties and Geometry

| Pile Length |  |  |  | 324.00 in |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Depth of ground surface below top of pile |  |  |  | 12.00 in |  |
| slope angle of ground surface |  |  |  | . 00 deg. |  |
| Structural properties of pile defined using 2 points |  |  |  |  |  |
| Point | $\begin{aligned} & \text { Depth } \\ & \times \\ & \text { in } \end{aligned}$ | Pile Diameter in | Moment of Inertia in**4 | $\begin{aligned} & \text { Pile } \\ & \text { Area } \\ & \text { Sq.in } \end{aligned}$ | Modu7us of Elasticity 1bs/sq.in |
| 1 | 0.0000 | 108.00000 | 6678285. | 9160.9000 | 3604997. |
| 2 | 324.0000 | 108.00000 | 6678285. | 9160.9000 | 3604997. |

Please note that because this analysis makes computations of ultimate moment capacity and pile response using nonlinear bending stiffness that the above values of moment of inertia and modulus of are not used for any computations other than total stress due to combined axial loading and bending.

## Soil and Rock Layering Information

The soil profile is modelled using 4 layers
Layer 1 is stiff clay without free water Distance from top of pile to top of layer $=12.000 \mathrm{in}$ Distance from top of pile to bottom of layer $=\quad 84.000$ in
Layer 2 is stiff clay without free water Distance from top of pile to top of layer $=84.000$ in
Distance from top of pile to bottom of layer $=156.000$ in
Layer 3 is sand, $p-y$ criteria by Reese et al., 1974
Distance from top of pile to top of layer $=156.000$ in
Distance from top of pile to bottom of layer $=336.000$ in $\mathrm{p}-\mathrm{y}$ subgrade modulus k for top of soil layer $=\quad 225.000 \mathrm{lbs} / \mathrm{in} * * 3$ $\mathrm{p}-\mathrm{y}$ subgrade modulus k for bottom of layer $=225.000 \mathrm{lbs} / \mathrm{in}^{* *}{ }^{3}$
Layer 4 is sand, p-y criteria by Reese et al., 1974
Distance from top of pile to top of layer $=336.000 \mathrm{in}$
Distance from top of pile to bottom of layer $=492.000 \mathrm{in}$
$\mathrm{p}-\mathrm{y}$ subgrade modulus k for top of soil layer $=225.000 \mathrm{lbs} / \mathrm{in} * * 3$
$\mathrm{p}-\mathrm{y}$ subgrade modulus k for bottom of layer $=225.000 \mathrm{lbs} / \mathrm{in} * * 3$
(Depth of lowest layer extends 168.00 in below pile tip)

Effective unit weight of sail with depth defined using 8 points

| Point No. | $\underset{\text { in }}{\text { Depth }} x$ | Eff. Unit weight 1bs/in**3 |
| :---: | :---: | :---: |
| 1 | 12.00 | . 06660 |
| 2 | 84.00 | . 06660 |
| 3 | 84.00 | . 06660 |
| 4 | 156.00 | . 06660 |
| 5 | 156.00 | . 06660 |
| 6 | 336.00 | . 06660 |
| 7 | 336.00 | . 06660 |
| 8 | 492.00 | . 06660 |

Shear strength parameters with depth defined using 8 points

| Point No. | $\text { Depth } x$ <br> in | $\begin{aligned} & \text { Cohesion } \mathrm{c} \\ & 7 \mathrm{bs} / \mathrm{in}^{* *} 2 \end{aligned}$ | Angle of Friction Deg. | $\underset{\mathrm{k} \_\mathrm{rm}}{\mathrm{E} 50} \text { or }$ | $\underset{\text { RQD }}{\text { \% }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 12.000 | 13.89000 | . 00 | . 00700 | . 0 |
| 2 | 84.000 | 13.89000 | . 00 | . 00700 | 0 |
| 3 | 84.000 | 17.36000 | . 00 | . 00500 | 0 |
| 4 | 156.000 | 17.36000 | . 00 | . 00500 | . |
| 5 | 156.000 | . 00000 | 36.00 |  |  |
| 6 | 336.000 | . 00000 | 36.00 | ------- | -- |
| 7 | 336.000 | . 00000 | 42.00 | ------- |  |
| 8 | 492.000 | . 00000 | 42.00 | ----- |  |

Notes:
(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for $E 50$ when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

Static loading criteria was used for computation of $\mathrm{p}-\mathrm{y}$ curves.

Pile-head Loading and Pile-head Fixity Conditions
Number of loads specified $=1$
Load Case Number 1
Pile-head boundary conditions are Shear and Moment (BC Type 1)
shear force at pile head $=55333.333$ 7bs
Bending moment at pile head $=90960000.000$ in-1bs Axial load at pile head $=101200.000 \mathrm{lbs}$

3636901P. 7 po
Non-zero moment at pile head for this load case indicates the pile-head may rotate under the applied pile-head loading, but is not a free-head (zero moment) condition.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Number of sections $=1$

Pile section No. 1
The sectional shape is a circular drilled shaft (bored pile).
Outside Diameter $=108.0000 \mathrm{in}$
Material Properties:

| Compressive strength of Concrete | $=$ | 4.000 | kip/in**2 |
| :---: | :---: | :---: | :---: |
| Yield Stress of Reinforcement | = |  | kip/in**2 |
| Modulus of Elasticity of Reinforcement | $=$ | 29000. | kip/in**2 |
| Number of Reinforcing Bars | $=$ | 46 |  |
| Area of Single Bar | = | 1.00000 | in**2 |
| Number of Rows of Reinforcing Bars | = | 23 |  |
| Area of Steel | $=$ | 46.000 | in**2 |
| Area of Shaft | $=$ | 9160.884 | in**2 |
| Percentage of Steel Reinforcement | = | . 502 | percent |
| Cover Thickness (edge to bar center) | $=$ | 4.064 |  |
| Unfactored Axial Squash Load Capacity | $=$ | 33750.61 | kip |

Distribution and Area of Steel Reinforcement

| Row <br> Number | Area of <br> Reinforcement <br> in**2 | Distance to <br> Centroidal Axis <br> in |
| :---: | :---: | :---: |
| 1 | 2.000 | 49.820 |
| 2 | 2.000 | 48.892 |
| 3 | 2.000 | 47.053 |
| 4 | 2.000 | 44.337 |
| 5 | 2.000 | 40.796 |
| 6 | 2.000 | 36.495 |
| 7 | 2.000 | 31.514 |
| 8 | 2.000 | 25.946 |
| 9 | 2.000 | 19.895 |
| 10 | 2.000 | 13.473 |
| 11 | 2.000 | 6.800 |
| 12 | 2.000 | -6.000 |
| 13 | 2.000 | -13.473 |
| 14 | 2.000 | -19.895 |
| 15 | 2.000 | -25.946 |
| 16 | 2.000 | -31.514 |
| 17 | 2.000 | -36.495 |
| 18 | 2.000 | -40.796 |
| 19 | 2.000 | -44.337 |
| 20 | 2.000 | -47.053 |
| 21 | 2.000 | -48.892 |
| 22 |  | -49.820 |



|  |  | 363690 00001450 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{r} 63536998 . \\ 33679.74625 \end{array}$ | 4.381862E+1.2 | . 00001450 | . 00034401 | 23.72506624 | 1097.07162 |
| 63536998. | $4.235800 \mathrm{E}+12$ | . 00001.500 | . 00035552 | 23.70152181 | 1130.05275 |
| $\begin{array}{r} 851.35864 \\ 63536998 . \end{array}$ | $4.099161 \mathrm{E}+12$ | . 00001550 | . 00036705 | 23.68033344 | 1162.83428 |
| 36022.59477 6353698. |  | . 00001600 |  |  |  |
| 37193.45371 | $3.971062 E+12$ | . 00001600 | . 00037858 | 23.66128224 | 1195.41546 |
| $\begin{array}{r} 63536998 . \\ 38363.93336 \end{array}$ | $3.850727 \mathrm{E}+12$ | . 00001650 | . 00039013 | 23.64417833 | 1227.79567 |
| 64924752. | $3.819103 \mathrm{E}+12$ | . 00001700 | . 00040169 | 23.62885755 | 1259.97443 |
| 534.02994 <br> 66710510. | $3.812029 \mathrm{E}+1.2$ | . 00001750 | . 00041327 | 23.61516863 | 1291.95096 |
| 40703.74266 |  |  |  |  |  |
| 68494676. | $3.805260 \mathrm{E}+12$ | . 00001800 | . 00042485 | 23.60297960 | 1323.72462 |
| $\begin{array}{r} 41873.06941 \\ 70277245 . \end{array}$ | $3.798770 \mathrm{E}+12$ | . 00001850 | . 00043646 | 23.59217459 | 1355.29484 |
| 43042.00711 |  |  |  |  |  |
| 72058216. | $3.792538 \mathrm{E}+12$ | . 00001900 | . 00044807 | 23.58265060 | 1386.66107 |
| 73837573. | $3.786542 \mathrm{E}+12$ | . 00001950 | . 00045970 | 23.57431108 | 1417.82255 |
| $\begin{array}{r} 45378.70391 \\ 77391431 . \end{array}$ | $3.775192 \mathrm{E}+12$ | . 00002050 | . 00048300 | 23.56086034 | 1479.52890 |
| 47713.81339 |  |  |  |  |  |
| 80938743. | $3.764593 \mathrm{E}+12$ | . 00002150 | . 00050635 | 23.55123657 | 1540.40846 |
| $\begin{array}{r} 50047.31690 \\ 84479437 . \end{array}$ | $3.754642 \mathrm{E}+12$ | . 00002250 | . 00052976 | 23.54496020 | 1600.45582 |
| $52379.19442$ | $3.745254 \mathrm{E}+12$ | . 00002350 | . 00055323 | 23.54163855 | 1659.66571 |
| 54709.42232 " |  |  |  |  |  |
| 91540747. | $3.736357 \mathrm{E}+12$ | . 00002450 | . 00057675 | 23.54094011 | 1718.03256 |
| 95061214. | $3.727891 \mathrm{E}+12$ | . 00002550 | . 00060034 | 23.54258484 | 1775.55059 |
| 59364.84359 |  |  |  |  |  |
| 98136206. | $3.703253 \mathrm{E}+12$ | . 00002650 | . 00062305 | 23.51118046 | 1829.91249 |
| 60000.00000 <br> 1. $005819 \mathrm{E}+08$ | $3.657524 \mathrm{E}+12$ | . 00002750 | . 00064446 | 23.43479866 | 1880.19085 |
| 60000.00000 |  |  |  |  |  |
| $1.025382 \mathrm{E}+08$ $60000.00000$ | $3.597830 \mathrm{E}+12$ | . 00002850 | . 00066690 | 23.39999861 | 1932.11876 |
| $1.045310 \mathrm{E}+08$ | $3.543425 \mathrm{E}+12$ | . 00002950 | . 00068764 | 23.30992466 | 1979.14995 |
| $1.0621 .43 \mathrm{E}+08$ | $3.482437 \mathrm{E}+12$ | . 00003050 | . 00070713 | 23.18472558 | 2022.52009 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.076626 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ | $3.417861 \mathrm{E}+12$ | . 00003150 | . 00072600 | 23.04766577 | 2063.79577 |
| $1.090406 \mathrm{E}+08$ | $3.355096 \mathrm{E}+12$ | . 00003250 | . 00074471 | 22.91410464 | 2104.08348 |
| $1.102876 \mathrm{E}+08$ | $3.292166 \mathrm{E}+12$ | . 00003350 | . 00076305 | 22.77767891 | 2142.95177 |
| 1. $1.113952 \mathrm{E}+08$ | $3.228846 \mathrm{E}+12$ | . 00003450 | . 00078100 | 22.63778991 | 2180.37388 |
| 60000.00000 |  |  |  |  |  |
| $1.125004 \mathrm{E}+08$ | $3.169026 \mathrm{E}+12$ | . 00003550 | . 00079898 | 22.50656551 | 2217.29017 |
| 60000.00000 |  |  | . 0008165 |  |  |
| 60000.00000 |  | . 00003650 | . 0008165 | 22.37234777 | 2252.85411 |
| $1.143574 \mathrm{E}+08$ | $3.049531 \mathrm{E}+12$ | . 00003750 | . 00083385 | 22.23605400 | 2287.15480 |
| 1.152277E +08 | $2.992927 \mathrm{E}+12$ | . 00003850 | . 00085114 | 22. 10748500 | 2320.98571 |
| 60000.00000 |  |  |  | 22.10748500 | 2320.9857 |
| $1.160959 \mathrm{E}+08$ | $2.939137 \mathrm{E}+12$ | . 00003950 | . 00086845 | 21.98606461 | 2354.34530 |
| 60000.00000 |  |  |  |  |  |
| $1.168341 \mathrm{E}+08$ 60000.00000 | $2.884792 \mathrm{E}+12$ | . 00004050 | . 00088530 | 21.85932702 | 2386.27145 |
| $1.175078 \mathrm{E}+08$ | $2.831514 \mathrm{E}+12$ | . 00004150 | . 00090194 | 21.73356146 | 2417.28597 |
| 60000.00000 |  |  |  |  |  |

Page A6

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| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1.181797 E+08 \\ & 60000.00000 \end{aligned}$ | $2.780699 \mathrm{E}+12$ | . 00004250 | . 00091861 | 21.61424929 | 2447.86240 |
| 1.195924E+08 | $2.749252 \mathrm{E}+12$ | . 00004350 | . 00093960 | 21.60000032 | 2486.14060 |
| 6000.00000 | $2.687866 \mathrm{E}+12$ | . 00004450 | . 00095629 | 21.48963922 | 2515.66627 |
| 60000.00000 |  |  |  |  |  |
| $1.201765 \mathrm{E}+08$ | $2.641242 \mathrm{E}+12$ | . 00004550 | . 00097206 | 21.36390907 | 2543.02820 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.206719 E+08 \\ & 60000.00000 \end{aligned}$ | 2.59509 | . 00004650 | . 000987 | 21.23676270 | 2569.38990 |
| $1.211658 \mathrm{E}+08$ | $2.550859 \mathrm{E}+12$ | . 00004750 | . 00100298 | 21.11539382 | 2595.37541 |
| $1.216583 \mathrm{E}+08$ | $2.50841 .9 \mathrm{E}+12$ | . 00004850 | . 00101847 | 20.99944514 | 2620.98302 |
| 60000.00000 |  |  |  |  |  |
| $1.221494 \mathrm{E}+08$ | $2.467665 \mathrm{E}+12$ | . 00004950 | . 00103399 | 20.88859159 | 2646.21130 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.226391 \mathrm{E}+08 \\ & 60000.0000 \end{aligned}$ | $2.428496 \mathrm{E}+12$ | . 00005050 | . 00104952 | 382 | 1 |
| $1.231273 \mathrm{E}+08$ | $2.390821 \mathrm{E}+12$ | . 00005150 | . 00106507 | 20.68099183 | 2695.52374 |
| 1.234993E +08 | $2.352367 \mathrm{E}+12$ | . 00005250 | . 00108000 | 20.57136458 | 2718.54976 |
| 60000.00000 |  |  |  |  |  |
| $1.238623 E+08$ | $2.315183 \mathrm{E}+12$ | . 00005350 | . 00109490 | 20.46536475 | 2741.15287 |
| $1.242241 \mathrm{E}+08$ | $2.279340 \mathrm{E}+12$ | . 00005450 | . 00110982 | 20.36359745 | 2763.40415 |
| $\begin{aligned} & 60000.00000 \\ & \end{aligned}$ | $2.244768 \mathrm{E}+12$ | . 00005550 | . 00112475 | 20.26583737 | 2785.30237 |
| 60000.00000 |  |  |  |  |  |
| $1.249439 \mathrm{E}+08$ | $2.211396 \mathrm{E}+12$ | . 00005650 | . 00113971 | 20.17186886 | 2806.84575 |
| $\begin{aligned} & 1.253019 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ |  |  |  | 20.08149880 |  |
| $1.256587 \mathrm{E}+08$ | $2.148011 \mathrm{E}+12$ | . 00005850 | . 00116968 | 19.99454695 | 2848.86338 |
| 60000.00000 $1.260142 \mathrm{E}+08$ | $2.117885 \mathrm{E}+12$ | . 00005950 | . 00118469 | 19.91083950 | 2869.33473 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.261245 \mathrm{E}+08 \\ & 60000.0000 \end{aligned}$ | $2.050805 \mathrm{E}+12$ | . 00006150 | . 00121770 | 19.79999882 | 2913.22029 |
| $1.272906 \mathrm{E}+08$ | $2.004576 \mathrm{E}+12$ | . 00006350 | . 00125040 | 19.69141120 | 2954.81698 |
| 60000.00000 $1.277781 E+08$ | $1.950811 \mathrm{E}+12$ | . 00006550 | . 00127795 | 19.51069039 | 2988.05145 |
| 60000.00000 |  |  |  |  |  |
| $1.282618 \mathrm{E}+08$ | $1.900175 \mathrm{E}+12$ | . 00006750 | . 00130556 | 19.34166294 | 3020.07754 |
| 60000.00000 |  |  |  |  |  |
| $1.287416 \mathrm{E}+08$ | $1.852397 \mathrm{E}+12$ | . 00006950 | . 00133324 | 19.18333751 | 3050.88672 |
| 1.292175E+08 | $1.807237 \mathrm{E}+12$ | . 00007150 | . 00136099 | 19.03481930 | 3080.46904 |
| 60000.00000 |  |  |  |  |  |
| $1.296664 \mathrm{E}+08$ | $1.764168 \mathrm{E}+12$ | . 00007350 | . 00138859 | 18.89231998 | 3108.58046 |
| $\begin{aligned} & 60000.00000 \\ & 1.300011 \mathrm{E}+08 \end{aligned}$ | $1.721869 \mathrm{E}+12$ | . 000007550 | . 00141519 | 18.74419767 | 3134.38779 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & \text { 1. } 303324 \mathrm{E}+08 \\ & 60000.0000 \end{aligned}$ | $1.681709 \mathrm{E}+12$ | . 00007750 | . 00144185 | 18.60453397 | 3159.05987 |
| 1.306603E+08 | 1. $643525 \mathrm{E}+12$ | . 00007950 | . 00146858 | 18.47269481 | 3182.58786 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.309846 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ | $1.607173 \mathrm{E}+12$ | . 00008150 | . 00149537 | 18.34811693 | 3204.96346 |
| 1. $313054 \mathrm{E}+08$ | 1.572520E+12 | . 00008350 | . 00152223 | 18.23027891 | 3226.17728 |
| $1.316226 \mathrm{E}+08$ | $1.539446 \mathrm{E}+12$ | . 00008550 | . 00154915 | 18.11871725 | 3246.22054 |
| 60000.00000 |  |  |  |  |  |
| $1.319362 \mathrm{E}+08$ | $1.507842 \mathrm{E}+12$ | . 00008750 | . 00157614 | 18.01301032 | 3265.08421 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.331828 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ | $1.488076 \mathrm{E}+12$ | . 00008950 | . 00161100 | 18.00000054 | 3287.97176 |

Page A7

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| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1.331828 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ | $1.455550 \mathrm{E}+12$ | . 00009150 | . 00164405 | 17.96780115 | 3307.65310 |
| $1.331828 \mathrm{E}+08$ | $1.424415 \mathrm{E}+12$ | . 00009350 | . 00166861 | 17.84605247 | 3320.78585 |
| 60000.00000 <br> 1. $331828 \mathrm{E}+08$ | 1.394584E+12 | 00009550 | 00169310 |  |  |
| 60000.00000 |  |  |  | 17.72877771 |  |
| $1.332846 \mathrm{E}+08$ | $1.367022 \mathrm{E}+12$ | . 00009750 | . 00171765 | 17.61690384 | 3344.00212 |
| 60000.00000 $1.334684 \mathrm{E}+08$ | 1.341391E+12 | 000 |  |  |  |
| 60000.00000 |  |  |  |  |  |
| $1.336494 \mathrm{E}+08$ | $1.316742 \mathrm{E}+12$ | . 00010150 | . 00176692 | 17.40810674 | 3363.29018 |
| $\begin{aligned} & 60000.00000 \\ & 1.338276 \mathrm{E}+08 \end{aligned}$ | 1. $293020 \mathrm{E}+12$ | . 00010350 | . 00179165 | 17.31062025 | 3371.44239 |
| 60000.00000 |  |  |  |  |  |
| $1.340030 \mathrm{E}+08$ | $1.270170 \mathrm{E}+12$ | . 00010550 | . 00181644 | 17.21739846 | 3378.58967 |
| 60000.00000 |  |  |  |  |  |
| $1.341755 \mathrm{E}+08$ | $1.248145 \mathrm{E}+12$ | . 00010750 | . 00184128 | 17.12820965 | 3384.72413 |
| $1.343452 \mathrm{E}+08$ | $1.226897 \mathrm{E}+12$ | . 00010950 | . 00186619 | 17.04283816 | 3389.83773 |
| 60000.00000 |  |  |  |  |  |
| 1.345120E+08 | $1.206386 \mathrm{E}+12$ | . 00011150 | . 00189116 | 16.96108443 | 3393.92232 |
| 60000.00000 $1.346758 \mathrm{E}+08$ |  |  |  |  |  |
| $\begin{aligned} & 1.346758 \mathrm{E}+08 \\ & 6000.00000 \end{aligned}$ | 1.186571E+1.2 | . 00011350 | . 00191619 | 16.88276178 | 3396.96958 |
| 1.348367E+08 | 1.167418E+12 | . 00011550 | . 00194129 | 16.80769962 | 3398.97112 |
| $1.349946 \mathrm{E}+08$ | 1.148891E+12 | . 00011750 | . 00196645 | 16.73574024 | 3399.91834 |
| 60000.00000 |  |  |  |  |  |
| $1.351239 \mathrm{E}+08$ | $1.130744 \mathrm{E}+12$ | . 00011950 | . 00199128 | 16.66340750 | 3396.33832 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.352121 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ | $1.112857 \mathrm{E}+12$ | . 00012150 | . 00201542 | 16.58784002 | 3390.43399 |
| $1.352995 \mathrm{E}+08$ | $1.095542 \mathrm{E}+12$ | . 00012350 | . 00203963 | 16.51520795 | 3384.51374 |
| $1.353859 \mathrm{E}+08$ | $1.078772 \mathrm{E}+12$ | . 00012550 | . 00206389 | 16.44536644 | 3379.60412 |
| 60000.00000 |  |  |  |  |  |
| $1.354716 \mathrm{E}+08$ | $1.062522 \mathrm{E}+12$ | . 00012750 | . 00208822 | 16.37819642 | 3384.58671 |
| $\begin{aligned} & 60000.00000 \\ & 1.355563 \mathrm{E}+08 \end{aligned}$ | $1.046767 \mathrm{E}+12$ | . 00012950 | . 00211261 | 16.31357235 | 3388.88531 |
| 60000.00000 |  |  |  |  |  |
| $1.356402 \mathrm{E}+08$ | $1.031484 \mathrm{E}+1.2$ | . 00013150 | . 00213706 | 16.25138801 | 3392.49339 |
| 60000.00000 $1.356402 \mathrm{E}+08$ | $1.016031 \mathrm{E}+12$ | . 00013350 | . 00216270 | 16.19999903 | 3395.55388 |
| 60000.00000 |  |  |  |  |  |
| $1.356402 \mathrm{E}+08$ | $1.001035 \mathrm{E}+12$ | . 00013550 | . 00219510 | 16.19999903 | 3398.39571 |
| 60000.00000 $1.356402 \mathrm{E}+08$ |  |  |  |  |  |
| $1.356402 \mathrm{E}+08$ 60000.0000 | $9.864740 \mathrm{E}+11$ | . 00013750 | . 00222750 | 16.19999903 | 3399.81974 |
| $1.357549 \mathrm{E}+08$ | $9.731537 \mathrm{E}+11$ | . 00013950 | . 00225990 | 16.19999903 | 3396.46445 |
| 60000.00000 |  |  |  |  |  |
| $1.362618 \mathrm{E}+08$ | $9.495598 \mathrm{E}+11$ | . 00014350 | . 00231231 | 16.11363620 | 3385.47062 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.363921 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ | 9.246921E+11 | . 00014750 | . 00235929 | 15.99521881 | 3375.90865 |
| $1.365207 \mathrm{E}+08$ | $9.011267 \mathrm{E}+11$ | . 00015150 | . 00240646 | 15.88423008 | 3379.51033 |
| 1.366476E+08 | $8.787630 \mathrm{E}+11$ | . 00015550 | . 00245381 | 15.78012282 | 3386.95807 |
| 60000.00000 |  |  |  |  |  |
| 1.367728E+08 | $8.575100 \mathrm{E}+11$ | . 00015950 | . 00250134 | 15.68240136 | 3392.76187 |
| 60000.00000 |  |  |  |  |  |
| 1.368963E+08 | $8.372863 \mathrm{E}+11$ | . 00016350 | . 00254907 | 15.59062797 | 3396.89027 |
| 60000.00000 $1.369866+08$ | $8.178302 \mathrm{E}+11$ | . 00016750 | . 00259567 | 15.49652106 | 3399.24036 |
| 60000.00000 |  |  |  |  |  |
| $1.370458 \mathrm{E}+08$ | $7.991010 \mathrm{E}+11$ | . 00017150 | . 00264120 | 15.40059239 | 3399.99993 |
| 60000.00000 |  |  |  |  |  |

Page A8

| 3636901p. 1 po |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1.371000 \mathrm{E}+08$ | $7.811968 \mathrm{E}+11$ | . 00017550 | . 00268726 | 15.31204408 | 3392.69550 |
| $\begin{aligned} & 60000.00000 \\ & 1.371536 \mathrm{E}+08 \end{aligned}$ | $7.640870 \mathrm{E}+11$ | . 00017950 | . 00273343 | 15.22802442 | 3385.25300 |
| 60000.00000 |  |  | . 00273343 |  |  |
| $1.372066 \mathrm{E}+08$ | $7.477200 \mathrm{E}+11$ | . 00018350 | . 00277970 | 15.14821154 | 3377.78414 |
| 60000.00000 |  |  |  |  |  |
| $\begin{aligned} & 1.372590 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ | $7.320481 \mathrm{E}+11$ | . 00018750 | . 00282606 | 15.07234150 | 3370.28865 |
| $1.373094 \mathrm{E}+08$ | $7.170203 \mathrm{E}+11$ | . 00019150 | . 00287266 | 15.00085849 | 3362.73156 |
| $1.373464 \mathrm{E}+08$ | $7.025393 \mathrm{E}+11$ | . 00019550 | . 00292054 | 14.93881899 | 3368.14966 |
| $\begin{aligned} & 60000.00000 \\ & 1.373827 \mathrm{E}+08 \end{aligned}$ | 6.886349E+11 | . 00019950 | . 00296854 | 14.87988228 | 3375.66846 |
| 60000.00000 | 6.886349E+11 | . 00019950 | . 00296854 | 14.87988228 | 3375.66846 |
| 1.374181E+08 | $6.752733 \mathrm{E}+11$ | . 00020350 | . 00301666 | 14.82388419 | 3382.20978 |
| 1.374527E+08 | $6.624228 E+11$ | . 00020750 | . 00306491 | 14.77066058 | 3387.75695 |
| $\begin{aligned} & 60000.00000 \\ & 1374865 \mathrm{~F}+08 \end{aligned}$ | $6.500545 \mathrm{E}+11$ | . 00021150 | . 00311329 | 1.4 .72006661 | 3392.29327 |
| 60000.00000 |  |  | . 00311329 | 14.72006661 | 3392.29327 |
| $1.375195 \mathrm{E}+08$ | $6.381413 \mathrm{E}+11$ | . 00021550 | . 00316181 | 14.67196709 | 3395.80139 |
| 60000.00000 $1.375424 \mathrm{E}+08$ |  |  |  |  |  |
| $\begin{aligned} & 1.375424 \mathrm{E}+08 \\ & 60000.00000 \end{aligned}$ | $6.266167 E+11$ | . 00021950 | . 00321142 | 14.63059777 | 3398.34125 |
| $1.375606 \mathrm{E}+08$ | $6.154835 \mathrm{E}+11$ | . 00022350 | . 00326157 | 14.59313911 | 3399.74008 |
| 60000.00000 $1.375762 \mathrm{E}+08$ | $6.047307 \mathrm{E}+11$ | . 00022750 | . 00331206 | 14.55850321 | 3397.63774 |
| 60000.00000 |  |  |  |  |  |
| $1.375886 \mathrm{E}+08$ | $5.943352 \mathrm{E}+11$ | . 00023150 | . 00336299 | 14.52695721 | 3390.83879 |
| 1.376005E+08 | $5.842909 \mathrm{E}+11$ | . 00023550 | . 00341401 | 14.49685639 | 3384.01659 |
| 60000.00000 |  |  |  |  |  |
| $1.376120 \mathrm{E}+08$ | $5.745803 \mathrm{E}+11$ | . 00023950 | . 00346512 | 14.46813637 | 3377.17064 |
| $\begin{aligned} & 60000.00000 \\ & 1.376230 \mathrm{E}+08 \end{aligned}$ | 5.651870 E+11 | . 00024350 | . 00351632 | 14.44073600 | 3370.30050 |
| 60000.00000 |  |  |  |  |  |
| $1.376336 \mathrm{E}+08$ | $5.560953 \mathrm{E}+11$ | . 00024750 | . 00356761 | 14.41459411 | 3363.40597 |
| $\begin{aligned} & 60000.00000 \\ & 1.377643 \mathrm{E}+08 \end{aligned}$ | $5.477706 \mathrm{E}+11$ | . 00025150 | . 00362160 | 14.40000075 | 3355.79926 |
| 60000.00000 |  |  |  |  |  |
| $1.380538 \mathrm{E}+08$ | $5.403281 \mathrm{E}+11$ | . 00025550 | . 00367920 | 14.40000075 | 3347.23818 |
| 60000.00000 $1.383868 \mathrm{E}+08$ | $5.332824 \mathrm{E}+11$ | . 00025950 | . 00373680 | 14.40000075 | 3346.28944 |
| 60000.00000 |  |  |  |  |  |

Unfactored (Nominal) Moment Capacity at Concrete Strain of $0.003=137405.83726$ in-kip

Computed Values of Load Distribution and Deffection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head $=55333.333$ 1bs Specified moment at pile head $=90960000.000 \mathrm{in}$-ibs Specified axial load at pile head $=101200.000 \mathrm{lbs}$

Non-zero moment for this load case indicates the pile-head may rotate under the applied pile-head loading, but is not a free-head (zero moment )condition.
output verification:
Page A9

Computed forces and moments are within specified convergence limits.

Summary of pile Response(s)
Definition of Symbols for Pile-Head Loading Conditions:


The analysis ended normally.

### 1805.7.2.1 (2006 IBC) \& 1807.3.2.1 (2009 IBC)

$d=A / 2^{\star}\left(1+\left(1+\left(4.36^{\star} h / A\right)\right)^{\wedge} 0.5\right)$
Monopole
Moment (ft-k) 5685 Shear (k) 41.5
Caisson Diameter, b(f) 9 Caisson Height Above Ground (ft) Caisson Height Below Ground (ft)
Applied lateral force, $P$ (lbs) ..... 41500
Dist. from ground to application of $P, h(f t)$ ..... 137.99

$$
\mathrm{A}=2.34^{*} \mathrm{P} /(\mathrm{S} 1 * \mathrm{~b}) \quad 3.68
$$

Min. Depth of Embedment Required, d (ft) 25.45

## MAT FOUNDATION DESIGN BY SABRE TOWERS \& POLES

195' Monopole NSORO MASTEC LLC Brewers, KY (36901) 11-18-10 REB

Overall Loads:
Factored Moment (ft-kips) Factored Axial (kips)
Factored Shear (kips)
Bearing Design Strength (ks) Water Table Below Grade (ft) Width of Mat (ft) Thickness of Mat (ft) Depth to Bottom of Slab (ft) Quantity of Bolts in Bolt Circle Bolt Circle Diameter (in) Top of Concrete to Top of Bottom Threads (in) Diameter of Pier (ft)
Ht . of Pier Above Ground ( ft ) Ht. of Pier Below Ground (ft)

Quantity of Bars in Mat Bar Diameter in Mat (in) Area of Bars in Mat (in ${ }^{2}$ ) Spacing of Bars in Mat (in) Quantity of Bars Pier Bar Diameter in Pier (in)
Tie Bar Diameter in Pier (in) Spacing of Ties (in)
Area of Bars in Pier (in ${ }^{2}$ )
Spacing of Bars in Pier (in) fo (ki) fy (ki)
Unit Wt. of Soil (kef)
Unit Wt. of Concrete (kef)

| 5685 |
| :---: |
| 75.9 |
| 41.5 |
| 9 |
| 999 |
| 27 |
| 25 |
| 5.5 |
| 16 |
| 74.75 |


| 60 |
| :---: |
| 9 |
| 1 |
| 3 |
| 31 |
| 1 |
| 24.35 |
| 10.57 |
| 46 |
| 1.128 |
| 0.5 |
| 12 |
| 45.97 |
| 6.82 |
| 4 |
| 60 |
| 0.115 |
| 0.15 |

Volume of Concrete ( $\mathrm{yd} \mathrm{d}^{3}$ )
76.92

Two-Way Shear Action:
Average d (in)
$\phi V_{c}$ (kips)
$\phi V_{c}=\phi\left(2+4 / \beta_{c}\right) f_{c}^{1 / 2} b_{o} d$
2076.7
3115.1
$\phi V_{c}=\phi\left(\alpha_{s} d / b_{0}+2\right) f_{c}{ }^{1 / 2} b_{0} d$
$\phi V_{c}=\phi 4 f_{c}{ }^{1 / 2} b_{0} d$
2321.0
2076.7

Shear perimeter, $b_{0}$ (in)
$\beta_{c}$
420.97

1

One-Way Shear:
$\phi V_{c}$ (kips)
905.7

Stability:
Overturning Design Strength (ft-k) 6247.1

Max. Net Bearing Press. (ksf)
Ultimate Bearing Pressure ( ksf ) Bearing $\boldsymbol{\Phi}$ s


Minimum Pier Diameter (ft) Equivalent Square b (ft)

Recommended Spacing (in)
6 to 12

| Minimum Pier $A_{s}\left(\mathrm{in}^{2}\right)$ <br> Recommended Spacing (in) | 45.80 |
| :---: | :---: |
| 6 to 12 |  |

121.7

MAT FOUNDATION DESIGN BY SABRE TOWERS \& POLES (CONTINUED)
$195^{\prime}$ Monopole NSORO MASTEC LLC Brewers, KY (36901) 11-18-10 REB


| Condition | 1 is OK, 0 Fails |
| :---: | :---: |
| Maximum Soil Bearing Pressure | 1 |
| Pier Area of Steel | 1 |
| Pier Shear | 1 |
| Interaction Diagram Visual Check | 1 |
| Two-Way Shear Action | 1 |
| One-Way Shear Action | 1 |
| Overturning | 1 |
| Flexure | 1 |
| Steel Ratio | 1 |
| Length of Development in Pad | 1 |
| Hook Development | 1 |

## Exhibit E

## ENVIRONMENTAL CORPORATION OF AMERICA

November 8, 2010

AT\&T Mobility<br>10830 Penion Drive<br>Louisville, Kentucky 40299<br>Attention: Ms. Michelle Ward<br>Subject: Report of Geotechnical Investigation AT\&T Site AL6502 BREWERS<br>7278 State Route 464<br>ECA Project No. L-1106-4

Dear Ms. Ward:
Environmental Corporation of America (ECA) is pleased to submit this report of our investigation for the proposed project. Our services were provided as authorized by purchase order on August 25, 2010.

This report presents a review of the information provided to us, a description of the site and subsurface conditions, and our recommendations. The appendices contain a Boring Location Plan and Boring Log.

## Purpose and Scope of Work

The purpose of this exploration was to obtain specific subsurface data at the site and to provide geotechnical-related design parameters and construction recommendations for the proposed tower.

Our scope of work included the following:

- One soil test boring was drilled to a depth of 40 feet below the ground surface (bgs). Figure 1 shows the boring location. Standard penetration tests (SPTs) were conducted to obtain soil samples and SPT (N) values, in accondance with ASTM D1586.
- The depth to groundwater, if any, was measured in the boring after drilling was completed.

Ms. Michelle Ward
Page 2

- The soil samples were visually classified and a boring log was prepared. The soil conditions were evaluated by a registered professional engineer and this geotechnical report was prepared with our recommendations.

No physical testing of soil samples has been conducted to calculate site specific bearing capacities or settlements. We have recommended design parameters and settlements based on the SPT ( N ) values, an examination of the soil samples, and our experience with similar soil conditions and structures.

## Project Information

We were provided with a survey of the Property by FS Tan dated September 10, 2010. The Property is located in a grassed area.

We understand that plans call for the construction of a 195 -foot monopole tower on the site. We assume that the equipment building/cabinets will be pre-fabricated structures supported on a perimeter grade beam or spread footing.

## Site Conditions

The fieldwork was conducted on November 3, 2010. Information obtained from the boring was used to help us evaluate the subsurface conditions and to assist in formulating our recommendations.

## Subsurface Conditions

The subsurface conditions were explored with one soil test boring, B-1, drilled approximately as shown on Figure 1. The site had been staked prior to our visit.

Soils encountered in the boring graded with depth from silt, to silty clay, to clayey sand, and finally silty sand with rounded gravel. These soils classified as ML, CL, SC, and SM soil types based on the Unified Soil Classification System (USCS). N -values were relatively high and ranged from 19 to over 100 blows per foot (bpf).

Groundwater was not present in the boring at the time the boring was completed and the moisture content of the deepest soil samples did not indicate the presence of groundwater.

## Recommendations

Tower Foundations: The subsurface conditions are suitable for support of the tower using a mat or caisson foundation.

For a mat foundation, we recommend that the mat be supported at a depth of about 5 feet minimum and be designed for a maximum net allowable soil bearing pressure of 6 kips per square foot (ksf). Total and differential settlements should be less than about 1 -inch and $1 / 2$ inch, respectively.

For caisson foundation design, we recommend a friction design with the depth of the caisson dependent on the capacity required. Soil parameters that may be of use in design are as follows:

|  | Depth below ground surface |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
|  | $0-6 \mathrm{ft}$ | $6-12 \mathrm{ft}$ | $12-27 \mathrm{ft}$ | $27-40 \mathrm{ft}$ |
| Coefficient of passive earth pressure | 1.0 | 1.0 | 3.9 | 5.0 |
| Unit weight of soil (pcf) | 115 | 115 | 115 | 115 |
| Lateral subgrade modulus (pci) | 200 | 200 | 275 | 300 |
| Cohesion, psf | 2000 | 2500 | 0 | 0 |
| Angle of internal friction, degrees | 0 | 0 | 36 | 42 |
| Allowable skin friction (ksf) | 0.3 | 0.4 | 0.65 | 1.3 |
| Allowable end bearing (ksf) | 6 | 6 | 7 | 8 |

Groundwater was not encountered after the completion of drilling. Therefore, the contractor should be able to place concrete "in the dry". However, the sand below about 17 feet has the potential to cave if not cased.

Building Foundations: The proposed equipment cabinet(s) can be supported on a spread footing foundation. A maximum allowable net bearing pressure of 3.0 kips per $\mathrm{ft}^{2}$ should be used to design the building/cabinet foundation. Total and differential settlements should be less than $1 / 2$-inch and $1 / 4$-inch, respectively.

Foundation Excavations: To avoid softening of the shallow soils exposed at the foundation bearing level, excavations should not be left open for extended periods, prior to placing reinforcing steel and concrete. If rain or freezing weather is expected, excavations should not be completed. Leaving the excavations at least 1 ft above final grade should protect the bearing soils from deterioration.

If the excavation must remain open overnight or if rainfall becomes imminent while the bearing soils are exposed, we recommend that a 2 to 4 -inch thick "mud-mat" of "lean" ( 2000 psi ) concrete be placed on the bearing soils before the placement of reinforcing steel. If the bearing soils are softened by surface water intrusion or exposure, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete.

Fill Placement: The amount of fill required for this project depends on the planned final grades, but we expect it to be minimal. Any required fill should be placed in maximum 8 -inch thick lifts. The soil moisture content should be close to the optimum moisture content. The soil should be compacted to at least $98 \%$ of the maximum dry density, as determined by the standard Proctor method (ASTM D-698).

In areas supporting floor slabs or pavements, the upper 18 inches of fill should be compacted to $100 \%$ of the standard Proctor density. As no laboratory testing has been conducted, we do not know the capability of the surficial soil to support pavements. However, we suggest that the upper soils be replaced by granular fill in areas of heavy traffic to improve the subgrade support capabilities and moisture sensitivity.

Field density tests should be conducted at routine intervals, as the fill is being placed, to verify that adequate compaction is achieved.

Prior to placing any new fill, any soft or loose near surface soils should be removed and the area proofrolled with a heavy vehicle to confirm that any unsuitable soil conditions have been discovered.

## Basis for Recommendations

The subsurface conditions encountered at the boring location are shown on the Boring Log in Appendix B. This Boring Log represents our interpretation of the subsurface conditions based on the field logs and visual examination of field samples by an engineer. The lines designating the interface between various strata on the Boring Log represents the approximate interface locations. In addition, the transition between strata may be gradual. The water level shown on the Boring Log, if any, represents the condition only at the time of our exploration.

The recommendations contained herein are based in part on project information provided to us and only apply to the specific project and site discussed in this report. If the project information section in this report contains incorrect information or if additional information is available, please let us know so that we may review the validity of our recommendations.

Regardless of the thoroughness of a geotechnical investigation, there is always a possibility that conditions between borings will be different from those at specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process may itself alter soil conditions. Therefore, experienced geotechnical personnel should observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations to solve the problems created. ECA is best qualified to provide this service based on our familiarity with the project, the subsurface conditions, and the intent of the recommendations and design.

We wish to remind you that we will store the soil samples for 30 days. The samples will then be discarded unless you request otherwise.

Ms. Michelle Ward
Page 5
We will be happy to discuss our recommendations with you and look forward to providing the additional studies or services necessary to complete this project. We appreciate the opportunity to be of service. Please call us with any questions at (770) 667-2040.

Sincerely, Environmental Corporation obffińmegica



Appendix A Boring Location Plan
Appendix B Boring Log

APPENDIX A
FIGURE

## Agricultural Field

HOUSE


Proposed Lease Area


1 Agricultural
Field

NOT TO SCALE

[^0]
## APPENDIX B

## BORING LOG

Project: AT\&T AL6502 - (Brewers)

## Log of Boring: B1

City, State Brewers, KY

Client: Nsoro Mas Tec
Drill Date: November 3, 2010

ECA Job No: L-1106-4
Field Rep: Butler


Drilled By: Tri-State Drilling

Borehole Size: 2.25" ID

Drill Method: Hollow Stem Auger

Depth to Water: N/A

Total Depth: 40 ft

Sheet: 1 of 1

Environmental Corp. of America 1375 Union Hill Indus. Ct., Ste A Alpharetta, GA 30004
(770) 667-2040

## Exhibit F

American Towers
Crown Communication
SBA Towers
Verizon
Sprint / Nextel
T-Mobile
Bluegrass Cellular
Shared Sites
Cricket
Pegasus Towers


Red Flags indicate AT\&T existing and proposed locations.
Blue Flags indicate non-AT\&T existing towers.


Exhibit G

# * Federal Airways \& Airspace <br> * Summary Report: New Construction 

Airspace Specialist: Nicholas Mears
File: BREWERS
Location: Mayfield, KY
Distance: 7.4 Statute Miles
Direction: $279^{\circ}$ (true bearing)
Latitude: $36^{\circ}-43^{\prime}-05.26^{\prime \prime} \quad$ Longitude: $88^{\circ}-30^{\prime}-54.94^{\prime \prime}$
SITE ELEVATION AMSL...... 531 ft .
STRUCTURE HEIGHT......... 199 ft .
OVERALL HEIGHT AMSL...... 730 ft .
NOTICE CRITERIA
FAR 77.13(a)(1): NNR (DNE 200 ft AGL )
FAR 77.13(a)(2): NNR (DNE Notice Slope)
FAR 77.13(a)(3): NNR (Not a Traverse Way)
FAR 77.13(a)(4): NNR FAR 77.13(a)(4) Notice Criteria for M25
FAR 77.13(a)(4): NNR FAR 77.13(a)(4) Notice Criteria for CEY
FAR 77.13(a)(5): NNR (Off Airport Construction)
$\mathrm{NR}=$ Notice Required
NNR = Notice Not Required
PNR $=$ Possible Notice Required (depends upon actual IFR procedure)
Notice to the FAA is not required at the analyzed location and height.
OBSTRUCTION STANDARDS
FAR 77.23(a)(1): DNE 500 ft AGL
FAR 77.23(a)(2): DNE - Airport Surface
FAR 77.25(a): DNE - Horizontal Surface
FAR 77.25(b): DNE - Conical Surface
FAR 77.25(c): DNE - Primary Surface
FAR 77.25(d): DNE - Approach Surface
FAR 77.25(e): DNE - Transitional Surface
VFR TRAFFIC PATTERN AIRSPACE FOR: M25: MAYFIELD GRAVES COUNTY
Type: A RD: 26189.87 RE: 519.7
FAR 77.23(a)(1): DNE
FAR 77.23(a)(2): DNE - Height Less Than 200 feet AGL.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Approach Slope: DNE
VFR Transitional Slope: DNE
VFR TRAFFIC PATTERN AIRSPACE FOR: CEY: KYLE-OAKLEY FIELD
Type: A RD: 44889.35 RE: 576.4
FAR 77.23(a)(1): DNE
FAR 77.23(a)(2): DNE - Greater Than 6 NM.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Approach Slope: DNE
VFR Transitional Slope: DNE
TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)
FAR 77.23(a)(3) Departure Surface Criteria (40:1)
DNE Departure Surface
MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)
FAR 77.23(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 2000 ft AMSL
PRIVATE LANDING FACILITIES
No Private Landing Facilites Are Within 6 NM
AIR NAVIGATION ELECTRONIC FACILITIES
FAC ST DIST DELTA
IDNT TYPE AT FREQ VECTOR (ft) ELEVA ST LOCATION ANGLE
GGK NDB ON 0401. 246.34 24682 +240 KY MAYFIELD ..... 56
FCC AM PROOF-OF-PERFORMANCE
NOT REQUIRED: Structure is not near a FCC licensed AM
radio station Proof-of-Performance is not required.
Please review AM Station Report for details.
Nearest AM Station: WNGO @ 11993 meters.
Airspace® Summary Version 2010.9
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Copyright © 1989-201010-05-201015:11:48

## Patrick Bardone

| From: | Houlihan, John (KYTC) [John. Houlihan@ky.gov] |
| :--- | :--- |
| Sent: | Friday, October 01, 2010 7:59 AM |
| To: | Patrick Bardone |
| Subject: | RE: AT\&T Site EV3161 (Brewers) - KAZC TC 56-50 Filing - 09/30/10 |
|  |  |
| Importance: | Low |

Mr. Bardone,

This proposed antenna does not require a permit from the Kentucky Airport Zoning Commission, it does not meet any of the following jurisdiction criteria. Please save this email for your records.

## 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. 3-1076; 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.)

## Kentucky Airport Zoning Commission <br> John Houlihan, Administrator <br> 90 Airport Road, Building 400 <br> Frankfort, KY 40601 <br> Desk 502.564.0310 <br> Cell 502.330.3955 <br> http://transportation.ky.gov/aviation/kyzoning.html

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, disciosure 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.

To: Houlihan, John (KYTC)
Cc: Stephani Leadingham; Richard S. Elms; Terrance Sullivan; Patrick Bardone; Billy England; Vicki Hollis
Subject: AT\&T Site EV3161 (Brewers) - KAZC TC 56-50 Filing - 09/30/10
Good afternoon John,
As per my voicemail message, attached please find a copy of the above-mentioned KAZC TC 56-50 Submittal Package which includes the following supporting documentation for your review and approval:

1) KAZC Form $56-50$;
2) Site Area Map;
3) 1A Letter;
4) FAA Form 7460 ;

AT\&T is proposing the placement of a $190^{\prime}$ SST with a overall AGL equal to $199^{\prime}$ located in Graves County, Kentucky.
If you have any questions or need any additional information, please feel free to contact me.
Thank you in advance for your continued cooperation.

Regards,

The Power of being tocel. Everywhere

Patrick Bardone
Project Director

SBA Network Services
910 Twin Elms Court Nashville, TN 37210 561-239-4847 Mobile

PBardone@sbasite.com

## Exhibit H

ULS License

## Cellular License - $\mathbb{K N} K N 830$ - $\mathbb{N E W}$ CINGULAR WIRELESS PCS, LLC

| Call Sign | KNKN830 | Radio Service | CL - Cellular |
| :---: | :---: | :---: | :---: |
| Status | Active | Auth Type | Regular |
| Market |  |  |  |
| Market | CMA443 - Kentucky 1 - Fulton | Channel Block | A |
| Submarket | 0 | Phase | 2 |
| Dates |  |  |  |
| Grant | 08/21/2001 | Expiration | 10/01/2011 |
| Effective | 03/16/2010 | Cancellation |  |

Five Year Buildout Date
02/11/1997
Control Points
11650 Lyndon Farms Court, LOUISVILLE, KY P: (502)332-4700

Licensee
FRN 0003291192 Type Limited Liability Company

Licensee
NEW CINGULAR WIRELESS PCS, LLC 5601 LEGACY DRIVE, MS: A-3 PLANO, TX 75024
ATTN FCC Group

P:(469)229-7471
F:(469)229-7297
E:LG5201@ATT.COM

## Contact

AT\&T MOBILITY LLC

| Michael P Goggin | P:(202)457-2055 |
| :--- | :--- |
| 1120 20th Street, NW, Suite 1000 | F:(202)457-3074 |
| Washington, DC 20036 | E:MG7268@att.com |
| ATTN Michael P. Goggin |  |

Ownership and Qualifications
Radio Service Mobile
Type
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.

## Exhibit I



Directions to Site: From Mayfield at the corner of South Street and State Route 121 ( $6^{\text {th }}$ Street), proceed South on State Route 121 (6th Street) approximately 0.5 miles to State Route 464 (Backusburg Street). Turn left onto State Route 464 and proceed approximately 7.50 miles to proposed site on left; 7330 State Route 464.

## OPTION AND LEASE AGREEMENT

THIS OPTION AND LEASE AGREEMENT ("Agreement"), dated as of the latter of the signature dates below (the "Effective Date"), is entered into by Michael $S$. Adkison, a single person, having a mailing address of 7278 State Road 464 Mayfield, Kentucky 42066 ("Landlord") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 12555 Cingular Way, Suite 1300, Alpharetta, GA 30004 ("Tenant").

## BACKGROUND

Landlord owns or controls that certain plot, parcel or tract of land, together with all rights and privileges arising in connection therewith, located at 7278 State Road 464 Mayfield, in the County of Graves, State of Kentucky (collectively, the "Property"). Tenant desires to use a portion of the Property in connection with its federally licensed communications business. Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

## 1. OPTIONTOLEASE

(a) Landlord grants to Tenant an option (the "Option") to lease a certain portion of the Property containing approximately 10,000 square feet including the air space above such ground space for the placement of Tenant's Communication Facility as described on attached Exhibit I (the "Premises").
(b) During the Option Term (as defined below), and during the term of this Agreement, Tenant and its agents, engincers, surveyors and other representatives will have the right to enter upon the Property to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geólogical or engineering tests or studies of the Property (collectively, the "Tests"), to apply for and obtain licenses, permits, approvals, or other relief required of or deemed necessary or appropriate at Tenant's sole discretion for its use of the Premises and include, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits, and construction permits (collectively, the "Government Approvals"), initiate the ordering and/or scheduling of necessary utilities, and otherwise to do those things on or off the Property that, in the opinion of Tenant, are necessary in Tenant's sole discretion to determine the physical condition of the Property, the environmental history of the Property, Landlord's title to the Property and the feasibility or suitability of the Property for Tenant's Permitted Use, all at Tenant's expense. Tenant will not be liable to Landlond or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term, reasonable wear and tear and casualty not caused by Tenant excepted. In addition, Tenant shall indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or claims arising directly out of Tenant's Tests.
(c) In consideration of Landlord granting Tenant the Option, Tenant agrees to pay Landlord the sum of within thirty (30) business days of the Effective Date. The Option will be for an inuar unu ur vie (1) year commencing on the Effective Date (the "Imitial Option Term") and may be renewed by Tenaut for madaitional one (i) year (ine "Renewaí Opion Term") upon written notification to Landlord and the payment of an additional One Thousandand No/100 Dollars (\$1,000.00) no later than ten (10) days prior to the expiration date of the Initial Option Term. The Initial Option Term and any Renewal Option Term are collectively referred to as the "Option Term."
(d) The Option may be sold, assigned or transferred at any time by Tenant to an Affiliate of Tenant or to any third party agreeing to be subject to the terms hereof. Otherwise, the Option may not be sold, assigned
or transferred without the written consent of Landlord, such consent not to be unreasonably withheld, conditioned or delayed. From and after the date the Option has been sold, assigned or transferred by Tenant to a third party agreeing to be subject to the terms hereof, Tenant shall immediately be released from any and all liability under this Agreement, including the payment of any rental or other sums due, without any further action.
(e) During the Option Term, Tenant may exercise the Option by notifying Landlord in writing. If Tenant exercises the Option then Landlord leases the Premises to Tenant subject to the terms and conditions of this Agreement. If Tenant does not exercise the Option during the Initial Option Term or any extension thereof, this Agreement will terminate and the parties will have no further liability to each other.
(f) If during the Option Term, or during the term of this Agreement if the Option is exercised, Landlord decides to subdivide, sell, or change the status of the zoning of the Premises, Property or any of Landlord's contiguous, adjoining or surrounding property (the "Surrounding Property,") or in the event of foreclosure, Landlord shall immediately notify Tenant in writing. Any sale of the Property shall be subject to Tenant's rights under this Agreement. Landlord agrees that during the Option Term, or during the Term of this Agreement if the Option is exercised, Landlord shall not initiate or consent to any change in the zoning of the Premises, Property or Surrounding Property or impose or consent to any other restriction that would prevent or limit Tenant from using the Premises for the Permitted Use.
2. PERMITTED USE. Tenant may use the Premises for the transmission and reception of communications signals and the installation, construction, maintenance, operation, repair, replacement and upgrade of its communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable support structure, associated antennas, equipment shelters or cabinets and fencing and any other items necessary to the successful and secure use of the Premises (collectively, the "Communication Facility"), as well as the right to test, survey and review title on the Property; Tenant further has the right but not the obligation to add, modify and/or replace equipment in order to be in compliance with any current or future federal, state or local mandated application, including, but not limited to, emergency 911 communication services, at no additional cost to Tenant or Landlord (collectively, the "Permitted Use"). Landlord and Tenant agree that any portion of the Communication Facility that may be conceptually described on Exhibit 1 will not be deemed to limit Tenant's Permitted Use. If Exhibit 1 includes drawings of the initial installation of the Communication Facility, Landlord's execution of this Agreement will signify Landlord's approval of Exhibit 1. For a period of ninety (90) days following the start of construction, Landlord grants Tenant, its subtenants, licensees and sublicensees, the right to use such portions of Landlord's contiguous, adjoining or Surrounding Property as described on Exhibit 1 as may reasonably be required during construction and installation of the Communications Facility. Tenant has the right to install and operate transmission cables from the equipment shelter or cabinet to the antennas, electric lines from the main feed to the equipment shelter or cabinet and communication lines from the Property's main entry point to the equipment shelter or cabinet, and to make Property improvements, alterations, upgrades or additious appropriate for Tenant's use ("Tenant Changes"). Tenant Changes include the right to construct a fence around the Premises and undertake any other appropriate means to secure the Premises at Tenant's expense. Tenant agrees to comply with all applicable governmental laws, rules, statutes and regulations relating to its use of the Communication Facility on the Property. Tenant has the right to modify, supplement, replace, upgrade, expand the equipment, increase the number of antennas or relocate the Communication Facility within the Premises at any time during the term of this Agreement. Tenant will be allowed to make such alterations to the Property in order to accomplish Tenant's Changes or to insure that Tenant's Communication Facility complies with all applicable federal, state or local laws, rules or regulations. In the event Tenant desires to modify or upgrade the Communication Facility, and Tenant requires an additional portion of the Property (the "Additional Premikes") for such modification or upgrade, Landiond agrees to lease to Tenant the Additional Premises, upon the same terms and conditions set forth herein, except that the Rent shall increase, in conjunction with the lease of the Additional Premises by the amount equivalent to the then-current per square foot rental rate charged by Landlord to Tenant times the square footage of the Additional Premises. Landlord agrees to take such actions and enter into and deliver to Tenant such documents as Tenant reasonably requests in order to effect and memorialize the lease of the Additional Premises to Tenant.

## 3. TERM.

(a) The initial lease term will be five (5) years (the "Initiall Term"), commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of the Option (the "cerm Commencement Date"). The Initial Term will terminate on the fifth ( $5^{*}$ ) anniversary of the Term Commencement Date.
(b) This Agreement will automatically renew for four (4) additional five (5) year term(s) (each five (5) year term shall be defined as an "Extension Term"), upon the same terms and conditions unless Tenant notifies Landlord in writing of Tenant's intention not to renew this Agreement at least sixty (60) days prior to the expiration of the existing Term.
(c) If, at least sixty (60) days prior to the end of the final Extension Term, either Landlord or Tenant has not given the other written notice of its desire that the term of this Agreement end at the expiration of the final Extension Term, then upon the expiration of the final Extension Term this Agreement shall contimue in force upon the same covenants, terms and conditions for a further term of one (1) year, and for annual terms thereafter ("Annual Term") until terminated by either party by giving to the other written notice of its intention to so terminate at least six (6) months prior to the end of any such Anvual Terma. Monthly rental duxing such annual terms shall be equal to the rent paid for the last month of the final Extension Term. If Tenant remains in possession of the Premises after the termination of this Agreement then Tenant will be deemed to be occupying the Premises on a month-to-month basis (the "Holdover Term"), subject to the terms and conditions of this Agreement.
(d) The Initial Term, any Extension Terms, any Annual Terms and any Holdover Term are collectively referred to as the Term (the "Term").

## 4. RENT.

(a) Commencing in the month following the date that Tenant commences construction (the "Rent Commencement Date"), Tenant will pav Landlord on or before the fifth ( $5^{\text {il }}$ ) day of each calendar month in advance f - (the "Rent"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within forty-five (45) days after the Rent Commencement Date.
(b) In year one (l) of each Extension Term, the monthly Rent will increase by : percent. Jover the Rent paid during the previous Term.
(c) All charges payable under this Agreement such as utilities and taxes shall be billed by Landlord within one (1) year from the end of the calendar year in which the charges were incurred; any charges beyond such period shall not be billed by Landlord, and shall not be payable by Tenant. The foregoing shall not apply to monthly Rent which is due and payable without a requirement that it be billed by Landlord. The provisions of this subsection shall survive the termination or expiration of this Agreement.

## 5. APPROVALS.

(a) Landlord agrees that Tenant's ability to use the Premises is contingent upon the suitability of the Premises and Property for Tenant's Permitted Use and Tenant's ability to obtain and maintain all Government Approvals. Landlord authorizes Tenant to prepare, execute and file all required applications to obtain Govermment Approvals for Tenant's Permitted Use under this Agreement and agrees to reasonably assist Tenant with such applications and with obtaining and maintaining the Government Approvals.
(b) Tenant has the right to obtain a title report or commitment for a leasehold title policy from a title insurance company of its choice and to have the Property surveyed by a surveyor of its choice.
(c) Tenant may also perform and obtain, at Tenant's sole cost and expense, soil borings, percolation tests, engineering procedures, environmental investigation or other tests or reports on, over, and under the Property, necessary to determine if Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals.
6. TERMINATION. This Agreement may be terminated, without penalty or further liability, as follows:
(a) by either party on thirty (30) days prior written notice, if the other party remains in default under Section 15 of this Agreement after the applicable cure periods;
(b) by Tenant upon written notice to Landlord, if Tenant is unable to obtain, or maintain, any required approval(s) or the issuance of a license or permit by any agency, board, court or other governmental authority necessary for the construction or operation of the Communication Facility as now or hereafter intended by Tenant; or if Tenant determines, in its sole discretion that the cost of or delay in obtaining or retaining the same is commercially unreasonable;
(c) by Tenant, upon written notice to Landlord, if Tenant detemines, in its sole discretion, due to the title report results or survey results, that the condition of the Premises is unsatisfactory for its intended uses;
(d) by Tenant upon written notice to Landlord for any reason or no reason, at any time prior to commencement of construction by Tenant; or
(e) by Tenant upon sixty (60) days' prior written notice to Landlord for any reason or no reason, so long as Tenant pays Landlord a termination fee equal to three (3) months ${ }^{2}$ Rent, at the then-current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any one or more of Sections 5 Approvals, 6(a) Termination, 6(b) Termination, 6(c) Termination, 8 Interference, 11 (d) Environmental, 18 Condemnation, 19 Casualty or 24(1) Severability of this Agreement.
7. INSURANCE During the Term, Tenant will carry, at its own cost and expense, the following insurance: (i) "All Risk" property insurance for its property's replacement cost; (ii) Workers' Compensation Insurance as required by law; and (iii) commercial general liability (CGL) insurance with respect to its activities on the Property, such insurance to afford minimum protection of Three Million Dollars ( $\$ 3,000,000$ ) combined single limit, per occurrence and in the aggregate, providing coverage for bodily injury and property damage. Tenant's CGL insurance shall contain a provision including Landlord as an additional insured to the extent of the indemnity provided by Tenant under this Agreement. Notwithstanding the foregoing, Tenant shall have the right to self-insure against the risks for which Tenant is required to insure against in this Section. In the event Tenant elects to self-insure its obligation to include Landiord as an additional insured as permitted by the previous sentence, the following provisions shall apply: (1) Landlord shall promptly and no later than seven (7) days after notice thereof provide Tenant with written notice of any claim, demand, lawsuit, or the like for which it seeks coverage pursuant to this Section and provide Tenant with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like; (2) Landlord shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of Tenant; (3) Landlord shall fully cooperate with Tenant in the defense of the claim, demand, lawsuit, or the like; (4) Tenant's self-insurance obligation for Landlord shall not extend to claims for panitive damages, exemplary damages, or gross negligence; and (5) such obligation shall not apply when the claim or liability arises from the negligent or intentional act or omission of Landlord, its employees, agents, or independent contractors.

## 8. INTERFERENCE.

(a) Where there are existing radio frequency user(s) on the Property, Landlord will provide Tenant, upon execution of this Agreement, with a list of all existing radio frequency user(s) on the Property to allow Tenant to evaluate the potential for interference. Tenant warrants that its use of the Premises will not interfere with existing radio frequency user(s) on the Property so disclosed by Landlord, as long as those existing radio frequency user(s) operate and continue to operate within their respective frequencies and in accordance with all applicable laws and regulations.
(6) Landiord will not grant, after the uate of this Agrement, a lease, license or any other nght to any third party for the use of the Property, if such use may in any way adyersely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.
(c) Landlord will not use, nor will Landlord permit its employees, tenants, licensees, invitees, agents or independent contractors to use, any portion of the Property in any way which intexferes with the

Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will cause such interference to cease within twenty-four (24) hours after receipt of notice of interference from Tenant. In the event any such interference does not cease within the aforementioned cure period, Landlord shall cease all operations which are suspected of causing interference (except for intermittent testing to determine the cause of such interference) until the interference has been corrected.
(d) For the purposes of this Agreement, "interference" may include, but is not limited to, any use on the Property or Surrounding Property that causes electronic or physical obstruction with, or degradation of, the communications signals from the Communication Facility.

## 9. INDEMNIFICATION.

(a) Tenant agrees to indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attomeys' fees and court costs) arising directly from the installation, use, maintenance, repair or removal of the Communication Facility or Tenant's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Landlord, its employees, agents or independent contractors.
(b) Landlord agrees to indemnify, defend and hold Tenant harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attomeys' fees and court costs) arising directly from the actions or failure to act of Landlord, its employees or agents, or Landlord's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Tenant, its employees, agents or independent contractors.

## 10. WARRANTIES.

(a) Tenant and Landlord each acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power and authority to enter into this Agreement aud bind itself hereto through the party set forth as signatory for the party below.
(b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the Property as a legal lot in fee simple, or controls the Property by lease or license; (ii) the Property is not and will not be encumbered by any liens, restrictions, mortgages, covenants, conditions, easements, leases, or any other agreements of record or not of record, which would adversely affect Tenant's Permitted Use and enjoyment of the Premises under this Agreement; (iii) as long as Tenant is not in default then Landlord grants to Tenant sole, actual, quiet and peaceful use, enjoyment and possession of the Premises; (iv) Landlord's execution and performance of this Agreement will not violate any laws, ordinances, covenants or the provisions of any mortgage, lease or other agreement binding on Landlord; and (v) if the Property is or becomes encumbered by a deed to secure a debt, mortgage or other security interest, Landlord will provide promptly to Tenant a mutually agreeable subordination, non-disturbance and attormment agreement.

## 11. ENVIRONMENTAL.

(a) Landlord represents and warrants that, except as may be identified in Exhibit 11 attached to this Agreement, (i) the Property, as of the date of this Agreement, is free of hazardous substances, including asbestos-containing materials and lead paint, and (ii) the Property has never been subject to any contamination or hazardous conditions resulting in any environmental investigation, inquiry or remediation. Landlord and Tenant agree that each will be responsible for compliance with any and all applicable governmental laws, rules, statutes, regulations, codes, ordinances, or principles of common law regulating or imposing standards of liability or standards of conduct with regard to protection of the environment or worker health and safety, as may now or at any time hereafter be in effect, to the extent such apply to that party's activity conducted in or on the Property.
(b) Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of the jndemnifying party for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding ("Claims"), to the extent arising from that party's breach of its obligations or representations under Section 11(a). Landlord agrees to hold harmless and
indemnify Tenant froma, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Landlord for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent anising from subsufface or other contamination of the Property with hazardous substances prior to the effective date of this Agreement or from such contamination caused by the acts or omissions of Landlord during the Term. Tenant agrees to hold harmless and indemnify Landlord from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Tenant for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from hazardous substances brought onto the Property by Tenant.
(c) The indemnifications of this Section 11 specifically include reasonable costs, expenses and fees incurred in connection with any investigation of Property conditions or any clean-up, remediation, removal or restoration work required by any governmental authority. The provisions of this Section 11 will survive the expiration or termination of this Agreement.
(d) In the event Tenant becomes aware of any hazardous substances on the Property, or any environmental, health or safety condition or matter relating to the Property, that, in Tenant's sole determination, renders the condition of the Premises or Property unsuitable for Tenant's use, or if Tenant believes that the leasing or continued leasing of the Premises would expose Tenant to undue risks of liability to a government agency or other third party, Tenant will have the right, in addition to any other rights it may have at law or in equity, to terminate this Agreement upon written notice to Landlord.
12. ACCESS. At all times throughout the Term of this Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access ("Access") to and over the Property, from an open and improved public road to the Premises, for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises. As may be described more fully in Exhibit 1, Landlord grants to Tenant an easement for such access and Landlord agrees to provide to Tenant such codes, keys and other instruments necessary for such access at no additional cost to Tenant. Landlord acknowledges that in the event Tenant cannot access the Premises, Tenant shall incur significant damage. If Landlord fails to provide the access granted by this Section 12, such failure shall be a default under this Agreement. In connection with such default, in addition to any other rights or remedies available to Tenant under this Agreement or at law or equity, Landlord shall pay Tenant, as liquidated damages and not as a penalty, $\$ 500.00$ per day in consideration of Tenant's damages until Landlord cures such default. Landlord and Tenant agree that Tenant's damages in the event of a denial of access are difficult, if not impossible, to ascertain, and the liquidated damages set forth above are a reasonable approximation of such damages. Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. Landlord shall execute al letter granting Tenant access to the Property substantially in the form attached as Exhibit 12; upon Tenant's request, Landlord shall execute additional letters during the Term.
13. REMOVAL/RESTORATION. All portions of the Communication Facility brought onto the Property by Tenant will be and remain Tenant's personal property and, at Tenant's option, may be removed by Tenant at any time during the Term. Landlord covenants and agrees that no part of the Communication Facility constructed, erected or placed on the Premises by Tenant will become, or be considered as being affixed to or a part of, the Property, it being the specific intention of Landlord that all improvements of every kind and nature constructed, erected or placed by Tenant on the Premises will be and remain the property of Tenant and may be removed by Tenant at any time during the Term. Within one hundred twenty (120) days of the termination of this Agreement, Tenant will remove all of Tenant's above-ground improvements and Tenant will, to the extent reasonable, restore the Premises to its condition at the commencement of this Agreement, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted. Notwithstanding the foregoing, Tenant will not be responsible for the replacement of any trees, shrubs or other vegetation, nor will Tenant be required to remove from the Premises or the Property any structural steel or any foundations or underground utilities.

## 14. MAINTENANCE/UTILITIES.

(a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted. Landlord will maintain and repair the Property and access thereto and all areas of the Premises where Tenant does not have exclusive control, in good and tenantable condition, subject to reasonable wear and tear and damage from the elements. Landlord will be responsible for maintenance of landscaping on the Property, including any landscaping installed by Tenant as a condition of this Agreement or any required permit.
(b) Tenant will be responsible for paying on a monthly or quarterly basis all utilities charges for electricity, telephone service or any other utility used or consumed by Tenant on the Premises. In the event Tenant cannot secure its own metered electrical supply, Tenant will have the right, at its own cost and expense, to submeter from Landlord. When submetering is required under this Agreement, Landlord will read the meter and provide Tenant with an invoice and usage data on a monthly basis. Landlord agrees that it will not include a markup on the utility charges. Landlord further agrees to provide the usage data and invoice on forms provided by Tenant and to send such forms to such address and/or agent designated by Tenant. Tenant will remit payment within forty-five (45) days of receipt of the usage data and required forms. As noted in Section 4(c) above, any utility fee recovery by Landlord is limited to a twelve (12) month period. If Tenant submeters electricity from Landlord, Landlord agrees to give Tenant at least twenty-four (24) hours advanced notice of any planned interruptions of said electricity. Landlord acknowledges that Tenant provides a communication service which requires electrical power to operate and must operate twenty-four (24) hours per day, seven (7) days per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption. Landlord will not be responsible for interference with, interruption of or failure, beyond the reasonable control of Landlord, of such services to be furnished or supplied by Landlord.
(c) Landlord hereby grants to any utility company providing utility services to Tenant an easement over the Property, from an open and improved public road to the Premises, and upon the Premises, for the purpose of constructing, operating and maintaining such lines, wires, circuits, and conduits, associated equipment cabinets and such appurtenances thereto, as such utility companies may from time to time require in order to provide such services to the Premises. Upon Tenant's or a utility company's request, Landlord will execute a separate recordable easement evidencing this grant, at no cost to Tenant or the public utility.

## 15. DEFAULT AND RIGHT TO CURE.

(a) The following will be deemed a default by Tenant and a breach of this Agreement: (i) nonpayment of Rent if such Rent remains unpaid for more than thirty (30) days after receipt of written notice from Landlord of such failure to pay; or (ii) Tenant's failure to perform any other term or condition under this Agreement within forty-five (45) days after receipt of written notice from Landlord specifying the failure. No such failure, however, will be deemed to exist if Tenant has commenced to cure such default within such period and provided that such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Tenant. If Tenant remains in default beyond any applicable cure period, Landlord will have the right to exercise any and all rights and remedies available to it under law and equity.
(b) The following will be deemed a default by Landlord and a breach of this Agreement: (i) failure to provide access to the Premises or to cure an interference problem within twenty-four (24) hours after receipt of written notice of such default; or (ii) Landlord's failure to perform any term, condition or breach of any warranty or covenant under this Agreement within forty-five (45) days after receipt of written notice from Tenant specifying the failure. No such failure, however, will be deemed to exist if Landlord has commenced to curc the default within such period and provided such effonts are prosecuted te completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Landlord. If Landlord remains in default beyond any applicable cure period, Tenant will have: (i) the right to cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant, and (ii) any and all other rights available to it under law and equity.
16. ASSIGNMENT/SUBLEASE. Tenant will have the right to assign this Agreement or sublease the Premises and its rights herein, in whole or in part, without Landlord's consent. Upon notification to Landlord of such assignment, Tenant will be relieved of all future performance, liabilities and obligations under this Agreement to the extent of such assigament.

## 17. NOTICES.

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

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If to Tenant: New Cingular Wireless PCS, LLC
    Attn: Network Real Estate Administration
    Re: Cell Site# EV3161; Cell Site Name: Brewers, KY_(
    Fixed Asset No: }1013403
    12555 Cingular Way, Suite 1300
    Alpharetta, GA 30004
With a copy to: New Cingular Wireless PCS, LLC
    Attn: AT&T Legal Department
    Re: Cell Site#: EV3161; Cell Site Name: Brewers, KY (State Abbreviation)
    Fixed Asset No:10134036
    1025 Lenox Park Blvd., 5 'th}\mathrm{ floor
    Atlanta, GA }3031
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The copy sent to the Legal Department is an administrative step which alone does not constitute legal notice.

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If to Landlord: Michael S. Adkison
    7278 State Road 464
    Mayfield, Kentucky 42066
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Either party hereto may change the place for the giving of notice to it by thirty ( 30 ) days' prior written notice to the other as provided herein.
(b) In the event of a change in ownership, transfer or sale of the Property, within ten (10) days of such transfer, Landlord or its successor will send the documents listed below in this subsection (b) to Tenant. Until Tenant receives all such documents, Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement.
i. Old deed to Property
ii. New deed to Property
iii. Bill of Sale or Transfer
iv. Copy of current Tax Bill
v. New IRS Form W-9
vi. Completed and Signed AT\&T Payment Direction Form
vii. Full contact information for new Landlord including phone number(s)
18. CONDEMNATION. In the event Landlord receives notification of any condemnation proceedings affecting the Property, Landlord will provide notice of the proceeding to Tenant within forty-eight (48) hours. If
a condemning authority takes all of the Property, or a portion sufficient, in Tenant's sole determination, to render the Premises unsuitable for Tenant, this Agreement will terminate as of the date the title vests in the condemning authority. The parties will each be entitled to pursue their own separate awards in the condemnation proceeds, which for Tenant will include, where applicable, the value of its Communication Facility, moving expenses, prepaid Rent, and business dislocation expenses. Tenant will be entitled to reimbursement for any prepaid Rent on a prorata basis.
19. CASUALTY. Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within forty-eight (48) hours of the casualty or other haim. If any part of the Communication Facility or Property is damaged by casualty or other harm as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may terminate this Agreement by providing written notice to Landlord, which termination will be effective as of the date of such casualty or other harm. Upon such termination, Tenant will be entitled to collect all insurance proceeds payable to Tenant on account thereof and to be reimbursed for any prepaid Rent on a prorata basis. Landlord agrees to permit Tenant to place a temporary transmission and reception facilities on the Property, but only until such time as Tenant is able to activate a replacement transmission facility at another location; notwithstanding the termination of the Agreement, such temporary facilities will be governed by all of the terms and conditions of this Agreement, including Rent. If Landlord or Tenant undertakes to rebuild or restore the Premises and/or the Communication Facility, as applicable, Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property at no additional Rent until the reconstruction of the Premises and/or the Communication Facility is completed. If Landlord determines not to rebuild or restore the Premises, Landlord will notify Tenant of such determination within thirty (30) days after the casualty or other harm. If Landlord does not so notify Tenant, then Landlord will promptly rebuild or restore the Premises to substantially the same condition as existed before the casualty or other harm. Landlord agrees that the Rent shall be abated until the Premises are rebuilt or restored, unless Tenant places temporary transmission and reception facilities on the Property.
20. WAIVER OF LANDLORD'S LIENS. Landlord waives any and all lien rights it may have, statutory or otherwise, concerming the Communication Facility or any portion thereof. The Communication Facility shall be deemed personal property for parposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law; Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time in Tenant's sole discretion and without Landlord's consent.
21. TAXES. Landlord shall be responsible for payment of all ad valorem taxes levied upon the lands, improvements and other property of Landlord. Tenant shall be responsible for all taxes levied upon Tenant's leasehold improvements (including Tenant's equipment building and tower) on the Premises. Landlord shall provide Tenant with copies of all assessment notices on or including the Premises immediately upon receipt, along with sufficient written documentation detailing any assessment increases attributable to the leasehold improvements, but in no event later than thirty (30) days after receipt by Landlord. If Landlord fails to provide such notice within such time frame, Landlord shall be responsible for all increases in taxes for the year covered by the assessment, and all subsequent years to the extent (a) Landlord continues to fail in providing notice, or (b) Tenant is precluded from challenging such assessment with the appropriate government authorities. Tenant shall have the right to contest, in good faith, the validity or the amount of any tax or assessment levied against the Premises by such appellate or other proceedings as may be appropriate in the jurisdiction, and may defer payment of such obligations, pay same under protest, or take such other steps as Tenant may deem appropriate. This right shall include the ability to institute any legal, regulatory or informal action in the name of Landlord, Tenant, or bofi, with respect to the valuation of the Premises. Landord shall cooperate in the institution and prosecution of any such proceedings and will execute any documents required therefor. The expense of any such proceedings shall be borne by Tenant and any refunds or rebates secured as a result of Tenant's action shall belong to Tenant.

## 22. SALE OF PROPERTY

(a) Landlord shall not be prohibited from the selling, leasing or use of any of the Property or the Surrounding Property except as provided below.
(b) If Landlord, at any time during the Term of this Agreement, decides to rezone or sell, subdivide or otherwise transfer all or any part of the Premises, or all or any part of the Property or Surrounding Property, to a purchaser other than Tenant, Landlord shall promptly notify Tenant in writing, and such rezoning, sale, subdivision or transfer shall be subject to this Agreement and Tenant's rights hereunder. In the event the Property is transferred, the new landlord shall have a duty at the time of such transfer to provide Tenant with a completed IRS Form $W-9$, or its equivalent, and other related paperwork to effect a transfer in Rent to the new landlord.
(c) Landlord agrees not to sell, lease or use any areas of the Property or Surrounding Property for the installation, operation or maintenance of other wireless communications facilities if such installation, operation or maintenance would interfere with Tenant's Permitted Use or communications equipment as determined by radio propagation tests performed by Tenant in its sole discretion, any such testing to be at the expense of Landlord or Landlord's prospective purchaser, and not Tenant. If the radio frequency propagation tests demonstrate levels of interference unacceptable to Tenant, Landlord shall be prohibited from selling, leasing or using any areas of the Property or the Surrounding Property for purposes of any installation, operation or maintenance of any other wireless communications facility or equipment.
(d) The provisions of this Section shall in no way limit or impair the obligations of Landlord under this Agreement, including interference and access obligations.
23. RENTAL STREAM OFFER. If at any time after the date of this Agreement, Landlord receives a bona fide written offer from a third party seeking an assignment of the rental stream associated with this Agreement ("Rental Stream Offer"), Landlord shall immediately furnish Tenant with a copy of the Rental Stream Offer. Tenant shall have the right within twenty (20) days after it receives such copy and representation to match the Rental Stream Offer and agree in writing to match the terms of the Rental Stream Offer. Such writing shall be in the form of a contract substantially similar to the Rental Stream Offer. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the twenty (20) day period, Landlord may assign the rental stream pursuant to the Rental Stream Offer, subject to the terms of this Agreement.

## 24. MISCELLANEOUS.

(a) Amendment/Waiver. This Agreement cannot be amended, modified or revised unless done in writing and signed by Landlord and Tenant. No provision may be waived except in a writing signed by both parties. The failure by a party to enforce any provision of this Agreement or to require performance by the other party will not be construed to be a waiver, or in any way affect the right of either party to enforce such provision thereafter.
(b) Memorandum/Short Form Lease. Contemporaneously with the execution of this Agreement, the parties will execute a recordable Memorandum or Short Form of Lease substantially in the form attached as Exhibit 24b. Either party may record this Memorandum or Short Form of Lease at any time during the Term, in its absolute discretion. Thereafter during the Term of this Agreement, either party will, at any time upon fifteen (15) business days' prior written notice from the other, execute, acknowledge and deliver to the other a recordable Memorandum or Short Form of Lease.
(c) Limitation of Liability. Except for the indemnity obligations set forth in this Agreement, and otherwise notwithstanding anything to the contrary in this Agreement, Tenant and Landlord each waives any claims that each may have against the other with respect to consequential, incidental or special damages, however caused, based on any theory of liabitity.
(d) Bind and Benefit. The terms and conditions contained in this Agreement will run with the Property and bind and inure to the benefit of the parties, their respective heirs, executors, administrators, successors and assigns.
(e) Entire Agreement. This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and
agrements with respect to the subject matter of this Agreement. Exhibits are numbered to correspond to the Section wherein they are first referenced.
(f) Governing Law. This Agreement will be governed by the laws of the state in which the Premises are located, without regard to conflicts of law.
(g) Interpretation. Unless otherwise specified, the following rules of construction and interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in this Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi) reference to a default will take into consideration any applicable notice, grace and cure periods; (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; and (viii) the singular use of words includes the plural where appropriate.
(h) Affiliates. All references to "Tenant" shall be deemed to include any Affiliate of New Cingular Wireless PCS, LLC using the Premises for any Permitted Use or otherwise exercising the rights of Tenant pursuant to this Agreement. "Affiliate" means with respect to a party to this Agreement, any person or entity that (directly or indirectly) controls, is controlled by, or under common control with, that party. "Control" of a person or entity means the power (directly or indirectly) to direct the management or policies of that person or entity, whether through the ownersbip of voting securities, by contract, by agency or otherwise.
(i) Survival. Any provisions of this Agreement relating to indemnification shall survive the termination or expiration hereof. In addition, any terms and conditions contained in this Agreement that by their sense and context are intended to survive the termination or expiration of this Agreement shall so survive.
(j) W-9. Landlord agrees to provide Tenant with a completed IRS Form W-9, or its equivalent, upon execution of this Agreement and at such other times as may be reasonably requested by Tenant.
(k) No Electronic Signature/No Option. The submission of this Agreement to any party for examination or consideration does not constitute an offer, reservation of or option for the Premises based on the terms set forth herein. This Agreement will become effective as a binding Agreement only upon the handwritten legal execution, acknowledgment and delivery hereof by Landlord and Tenant.

Severability. If any provision of this Agreement is held invalid, illegal or unenforceable by a court or agency of competent jurisdiction, (a) the validity, legality and enforceability of the remaining provisions of this Agreement are not affected or impaired in any way if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired; and (b) the parties shall negotiate in good faith in an attempt to agree to another provision (instead of the provision held to be invalid, illegal or unenforceable) that is valid, legal and enforceable and carries out the parties' intentions to the greatest lawful extent. If amy such action or determination renders the overall performance of this Agreement impossible or materially impairs the original purpose, intent or consideration of this Agreement, and the parties are, despite the good faith efforts of each, unable to amend this Agreement to retain the original purpose, intent and consideration in compliance with that court or agency determination, either party may terminate this Agreement upon sixty (60) days' prior written notice to the other party.
(m) Counterparts. This Agreement may be executed in two (2) or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties. All parties need not sign the same counterpart.
(n) WAIVER OF JURY TRLAL. EACH PARTY, TO THE EXTENT PERMITTED BY LAW, KNOWINGLY, VOLUNTARIIY AND INTENTIONAILY WAIVES ITS RIGHT TO A TRIAI RY JURV IN ANY ACTION OR PROCEEDING UNDER ANY THEORY OF LIABILITY ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR THE TRANSACTIONS IT CONTEMPLATES.

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

## . "LANDLORD"


[ACKNOWLEDGMENTS APPEAR ON THE NEXT.PAGE]

## TENANT ACKNOWLEDGMENT

## STATE OF TENNESSEE <br> $\qquad$

) ss:
COUNTY OF _WILLIAMSON)
On the 25 It hay of OCTOBER
10
, 2099, before me personally appeared _ Daniel Toth $\qquad$ —, and acknowledged under oath that he/she is the Manager, Real Estate and Construction of AT\&T Mobility Corporation, the Manager of New Cingular Wireless PCS, LLC, the Tenant named in the attached instrument, and as such was authorized to execute theoperngment on behalf of the Tenant.


Name: Michael S. Adkison

The foregoing instrument was acknowledged before me this $\qquad$ 9 day of $\qquad$ 2010 . by $2 \mathrm{La}_{\mathrm{c}} \mathrm{Pa}$


Serial No.: $\qquad$
My Commission Expires: De, $5,2012$.
[NOTARIAL SEAL]

## EXHIBIT 1

## DESCRIPTION OF PREMISES

## Page 1 of

to the Agreement dated OCTOBER 25, 2010, by and between Michael S. Adkison, a single person, as Landlord, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, as Tenant.

The Premises are described and/or depicted as follows:

## SEE ATTACHED

## Notes:

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


## Exhibit J



## Notice of Proposed Construction Wireless Telecommunications Facility

Riley Land Co. 250 Britain Lane<br>Mayfield, KY 42066

## Via Certified Mail Return Receipt Requested

Dear Landowner:
New Cingular Wireless PCS, LLC is applying to the Kentucky Public Service Commission (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new wireless telecommunications facility located at 7330 State Route 464, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 195 foot monopole tower, plus related ground facilities.

This notice is being sent to you because the Graves County Property Valuation Administrator's records indicate that you own property that is within a $500^{\prime}$ radius of the proposed tower site OR is contiguous to the property on which the tower is to be constructed.

The Commission invites your comments regarding the proposed construction and wants you to be aware of your right to intervene in the Commission's proceedings on this application. Your comments and request for intervention should be addressed to: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to case number 2010-00435 in any correspondence.

Sincerely,


Todd R. Briggs
Counsel for New Cingular Wireless PCS, LLC

## BRIGGS LAW OFFICE, PEC

# Notice of Proposed Construction Wireless Telecommunications Facility 

Herman Avery \& Maxine Chapman<br>4580 State Route 564<br>Hayfield, KY 42066

## Via Certified Mail Return Receipt Requested

Dear Landowner:
New Cingular Wireless PCS, LLC is applying to the Kentucky Public Service Commission (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new wireless telecommunications facility located at 7330 State Route 464, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 195 foot monopole tower, plus related ground facilities.

This notice is being sent to you because the Graves County Property Valuation Administrator's records indicate that you own property that is within a $500^{\prime}$ radius of the proposed tower site OR is contiguous to the property on which the tower is to be constructed.

The Commission invites your comments regarding the proposed construction and wants you to be aware of your right to intervene in the Commission's proceedings on this application. Your comments and request for intervention should be addressed to: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to case number 2010-00435 in any correspondence.

Sincerely,


Todd R. Briggs
Counsel for New Cingular Wireless PCS, LLC

## Enclosure

## BRiggs law Office, psC

\title{

Notice of Proposed Construction

## Wireless Telecommunications Facility

}

## Wireless Telecommunications Facility

}

Donald H. \& Margie Black

7440 State Route 464
Mayfield, KY 42066

## Via Certified Mail Return Receipt Requested

Dear Landowner:
New Cingular Wireless PCS, LLC is applying to the Kentucky Public Service Commission (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new wireless telecommunications facility located at 7330 State Route 464, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 195 foot monopole tower, plus related ground facilities.

This notice is being sent to you because the Graves County Property Valuation Administrator's records indicate that you own property that is within a 500 ' radius of the proposed tower site OR is contiguous to the property on which the tower is to be constructed.

The Commission invites your comments regarding the proposed construction and wants you to be aware of your right to intervene in the Commission's proceedings on this application. Your comments and request for intervention should be addressed to: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to case number 2010-00435 in any correspondence.

Sincerely,


Todd R. Briggs
Counsel for New Cingular Wireless PCS, LLC

Enclosure

## BRIGGS LAW OfFICE, PSC

# Notice of Proposed Construction Wireless Telecommunications Facility 

David M. \& Paula Franklin<br>215 Dove Lane<br>Paducah, KY 42001<br>\section*{Via Certified Mail Return Receipt Requested}

Dear Landowner:
New Cingular Wireless PCS, LLC is applying to the Kentucky Public Service Commission (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new wireless telecommunications facility located at 7330 State Route 464, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 195 foot monopole tower, plus related ground facilities.

This notice is being sent to you because the Graves County Property Valuation Administrator's records indicate that you own property that is within a $500^{\prime}$ radius of the proposed tower site OR is contiguous to the property on which the tower is to be constructed.

The Commission invites your comments regarding the proposed construction and wants you to be aware of your right to intervene in the Commission's proceedings on this application. Your comments and request for intervention should be addressed to: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to case number 2010-00435 in any correspondence.

Sincerely,


Todd R. Briggs
Counsel for New Cingular Wireless PCS, LLC

## BRiggs Law Office, PSC

## Notice of Proposed Construction Wireless Telecommunications Facility

Joe Thomas \& Betty Jane Waggoner

7706 State Route 464
Mayfield, KY 42066

## Via Certified Mail Return Receipt Requested

Dear Landowner:
New Cingular Wireless PCS, LLC is applying to the Kentucky Public Service Commission (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new wireless telecommunications facility located at 7330 State Route 464, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 195 foot monopole tower, plus related ground facilities.

This notice is being sent to you because the Graves County Property Valuation Administrator's records indicate that you own property that is within a $500^{\prime}$ radius of the proposed tower site OR is contiguous to the property on which the tower is to be constructed.

The Commission invites your comments regarding the proposed construction and wants you to be aware of your right to intervene in the Commission's proceedings on this application. Your comments and request for intervention should be addressed to: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to case number 2010-00435 in any correspondence.

Sincerely,


Todd R. Briggs
Counsel for New Cingular Wireless PCS, LLC

Enclosure

## Exhibit K

## Briggs law Office, psC

1301 Clear Springs Trace | Suite 205 | Louisville, Kentucky 40223<br>Telephone [502] 412-9222 | Facsimile [866] 333-4563<br>todd@briggslawoffice.net

TODD R. BRIGGS
also admitted in Colorado

## Via Certified Mail Return Receipt Requested

Honorable Tony Smith<br>Graves County Judge Executive<br>101 East South Street<br>Mayfield, KY 42066

## RE: Notice of Proposal to Construct Wireless Telecommunications Facility Kentucky Public Service Commission--Case No. 2010-00435

Dear Judge Jones:
New Cingular Wireless PCS, LLC is applying to the Kentucky Public Service Commission (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new wireless telecommunications facility located at 7330 State Route 464, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 195 foot monopole tower, plus related ground facilities.

You have a right to submit comments regarding the proposed construction to the Commission or to request intervention in the Commission's proceedings on this application.

Your comments and request for intervention should be addressed to: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to case number 2010-00435 in any correspondence.

Sincerely,

Enclosure

Exhibit L

## PUBLIC NOTICE

New Cingular Wireless PCS, LLC proposes to construct a telecommunications

## TOWER

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

Briggs Law Office, PSC 1301 Slear Springs Trace or Suite 205
Louis iille, KY 40223
(502) 412 -9222

Executive Drector
Public Service Commission 211 Sower Boulevard P. 0 Box 615

Frankfort, KY 40602

Please refer to Commission's
Case \#2010-00435
in your correspondence.

## PUBLIC NOTICE

New Cingular Wireless PCS, LLC proposes to construct a telecommunications IOWER on this site. If you have any questions please contact:

Briggs Law Office, PSC 1301 Clear Springs Trace Suite 205
Louisville, KY 40223
(502) 412-9222

Executive Director
or Public Service Commission 211 Sower Boulevard P.O. Box 615

Frankfort: KY 40602

Please refer to Commission's
Case \#2010-00435
in your correspondence.

## Exhibit M



## Exhibit N

To Whom It May Concern:

Dear Sir or Madam:
This letter is to state the need of the proposed AT\&T site called Brewers, to be located in Graves County, KY. The Brewers site is necessary to improve coverage and eliminate interference in eastern Graves County. This site will improve the coverage and reduce interference on Hwy 564, SR464, and the surrounding area. Our closest existing site to this area is over 5.5 miles away; thus, there is currently no dominant server in this area. This lack of a dominant server causes many quality issues for the customers. Currently customers in this area experience high dropped calls and may experience poor call quality or areas of no service. With the addition of this site, the customers in this area of Graves County will experience improved reliability, better in-building coverage, and improved access to emergency 911 services.

Sherri A Lewis
RF Design Engineer

## Sherri A Lewis

RF Design Engineer - Kentucky 3231 North Green River Road Evansville, IN 47715
Phone: 812-457-3327

December 6, 2010

To Whom It May Concern:

Dear Sir or Madam:
This letter is to state that there is no more suitable location reasonably available from which adequate service can be provided in the area of the proposed Brewers site. There are no collocation opportunities available as there are no tall structures located within this site's search area.

Sherri A Lewis
RF Design Engineer

## Sherri A Lewis

RF Design Engineer - Kentucky 3231 North Green River Road Evansville, IN 47715
Phone: 812-457-3327

## December 6, 2010

To Whom It May Concern:

## Dear Sir or Madam:

This letter is to serve as documentation that the proposed AT\&T site called Brewers, to be located in Graves County, KY at Latitude 36-43-05.26 North, Longitude 088-30-54.90 West, has been designed, and will be built and operated in accordance with all applicable FCC and FAA regulations.


Sherri A Lewis
RF Design Engineer


[^0]:    AT\&T Site AL6502 (Brewers)
    7278 State Route 464
    Mayfield, Graves County, Kentucky
    Figure 1: Boring Location Plan

