# RECEIVED

DEC 18 2008

### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION

In the Matter of:

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: 2008-00470 339 SIZEMORE CEMETERY ROAD, ONEIDA ) CLAY COUNTY, KENTUCKY, 40972 )

SITE NAME: HECTOR (098G0107)

#### 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, 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 a copy 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 **Exhibit A**.

3. Applicant proposes construction of an antenna tower in Clay County, Kentucky, which is outside the jurisdiction of a planning commission and Applicant submits the Application to the PSC for a CPCN pursuant to KRS §§ 278.020(1), 278.650, and 278.665.

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. 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972 (37° 09' 01.055" North Latitude, 83° 41' 03.667" West Longitude (NAD 83)), in an area entirely within Clay County. The property in which the WCF will be located is currently owned by Hiram & Rebecca Henson, pursuant to that Deed of record in Deed Book 211, Page 574 in the Office of the Clay County Clerk. The proposed WCF will consist of a 300 foot self-support tower with an approximately 6-foot tall lightning arrestor attached to the top of the tower for a total height of 306 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 gates(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**.

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
 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 Terracon Consultants, Inc. of Louisville, Kentucky, dated August 25, 2005 and is attached as **Exhibit E**. The name and address of the geotechnical engineering firm and the professional engineer registered in the Commonwealth of Kentucky who prepared the report is included as part of the exhibit.

8. A list of public utilities, corporations, and or persons with whom the proposed WCF is likely to compete with is attached as **Exhibit F**. Three 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. The Federal Aviation Administration Notice of Proposed Construction or Alteration filed on December 16, 2008 is attached as **Exhibit G**. The Kentucky Airport Zoning Commission Condition Approval dated November 13, 2008 is also attached as **Exhibit G**. Approval from the FAA and KAZC will be forwarded once received.

10. The Applicant operates on frequencies licensed by the Federal Communications Commission pursuant to applicable federal requirements. Copies of the licenses are attached as **Exhibit H**. Appropriate FCC required signage will be posted on the site.

11. Based on the review of Federal Emergency Management Agency Flood Insurance Rate Maps, the licensed, professional land surveyor has noted in **Exhibit B** that the Flood Insurance Rate Map (FIRM) No. 21051C0175C dated September 28, 2007 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 Nsoro, LLC.

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 also attached as **Exhibit I**.

14. Applicant has notified every person of the proposed construction who, according to the records of the Clay County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or is contiguous to the site property, by certified mail, return receipt requested. 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 is attached as **Exhibit J**. Copies of the certified letters sent to the referenced property owners are attached as **Exhibit J**.

15. Applicant has notified the Clay 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 Clay County Judge Executive of his right to request intervention. 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 (The Manchester Enterprise).

17. The site of the proposed WCF is located in an undeveloped area near Hector, 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. Applicant has attempted to co-locate on towers deigned to host multiple wireless service providers' facilities or existing structures, such as a telecommunications tower or another suitable structure capable of supporting the utility'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. No reasonably available telecommunications tower, or other suitable structure capable of supporting the Applicant's facilities which would provide adequate service to the area exists.

21. Correspondence and communication with regard to this Application

should be directed to:

Todd R. Briggs Briggs Law Office, PSC 17300 Polo Fields Lane Louisville, KY 40245 (502) 254-9756 briggslo@bellsouth.net

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,

IRKS.

Todd R. Briggs Briggs Law Office, PSC 17300 Polo Fields Lane Louisville, KY 40245 Telephone 502-254-9756 Counsel for New Cingular Wireless PCS, LLC

### LIST OF EXHIBITS

Exhibit A	Certificate of Authorization
Exhibit B	Site Development Plan and Survey
Exhibit C	Vertical Tower Profile
Exhibit D	Structural Design Report
Exhibit E	Geotechnical Engineering Report
Exhibit F	Competing Utilities List and Map of Like Facilities, General Area
Exhibit G	FAA Notice of Proposed Construction or Alteration KAZC Conditional Approval
Exhibit H	FCC Documentation
Exhibit I	Directions to Site and Copy of Lease Agreement
Exhibit J	Notification Listing and Copy of Property Owner Notifications
Exhibit K	Copy of County Judge Executive/Commissioner Notices
Exhibit L	
	Copy of Posted Notices
Exhibit M	Copy of Posted Notices Map of Search Area

Exhibit A

### **Commonwealth of Kentucky** Trey Grayson, Secretary of State

7/22/2008

**Division of Corporations** Business Filings

### **Certificate of Authorization**

P. O. Box 718 Frankfort, KY 40602 (502) 564-2848 http://www.sos.ky.gov

Authentication Number: 67612 Jurisdiction: Kentucky 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 organized 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 22nd day of July, 2008.



Tn6-

Trey Grayson Secretary of State Commonwealth of Kentucky 67612/0481848

Defavore PAGE 1 The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "AT&T WIRELESS PCS, LLC", CHANGING ITS NAME FROM "AT&T WIRELESS PCS, LLC" TO "NEW CINGULAR WIRELESS PCS, LLC", FILED IN THIS OFFICE ON THE TWENTY-SIXTH DAY OF OCTOBER, A.D. 2004, AT 11:07 O'CLOCK A.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF AMENDMENT IS THE TWENTY-SIXTH DAY OF OCTOBER, A.D. 2004, AT 7:30 O'CLOCK P.M.



Garniet Smith Hundson Harriet Smith Windsor, Secretary AUTHENTICATION: 3434823

namp. 10 25-01

#### State of Delaware Secretary of State Division of Corporations Delivered 11:20 AM 10/26/2004 FILED 11:07 AM 10/26/2004 CERTIFICATE OF AMENDMENT SRV 040770586 - 2445544 FILE TO THE CERTIFICATE OF FORMATION OF AT&T WIRELESS PCS, LLC

- 1. The name of the limited liability company is AT&T Wireless PCS, LLC (the "Company").
- 2. The Certificate 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 Certificate of Amendment shall be effective at 7:30 p.m. EDT on October 24, 2004.

[Signature on following page]

ATL01/11728913v2

IN WITNESS WHEREOF, AT&T Wireless PCS, LLC has caused this Certificate of Amendment to be executed by its duly authorized Manager this  $20^{20}$  day of October, 2004.

a

AT&T WIRELESS PCS, LLC

By: Cingular Wireless LLC, its Manager

By: e aro Name: Joanne Todaro Title: Assistant Secretary

-

ATL01/11728913v2

STATE OF DELAWARE

#### CERTIFICATE OF FORMATION OF

#### AT&T WIRELESS PCS, LLC

The undersigned authorized person hereby executes the following Certificate of Formation for the purpose of forming a limited liability company under the Delaware Limited Liability Company Act.

FIRST The name of the limited liability company is AT&T Wireless PCS, LLC.

SECOND: The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

DATED this \_7\_ day of September, 1999.

AT&T WIRELESS SERVICES, INC., As Authorized Person

Mark U. Thomas, Vice President

Ø 003

Exhibit B

### SITE PLAN NOTES

1. THE PROPOSED DEVELOPMENT IS FOR A 300 FOOT SELF-SUPPORT TOWER AND MULTIPLE EQUIPMENT LOCATIONS. ITS LOCATION IS 339 SIZEMORE CEMETERY RD, ONEIDA, KY 40972.

2. THE TOWER WILL BE ACCESSED BY A PROPOSED STABILIZED DRIVE FROM AN EXISTING ASPHALT ROADWAY (SIZEMORE CEMETERY ROAD) WHICH IS A PUBLIC RIGHT OF WAY. WATER, SANITARY SEWER, AND WASTE COLLECTIONS SERVICES ARE NOT REQUIRED FOR THE PROPOSED DEVELOPMENT.

3. CENTERLINE OF PROPOSED TOWER GEOGRAPHIC LOCATIONS: LATITUDE: 37' 09' 01.055"N 1944441.23 N LONGITUDE: 83' 41' 03.667"W 2242385.85 E

4. REMOVE ALL VEGETATION, CLEAN AND GRUBB LEASE AREA (WHERE REQUIRED).

5. FINISH GRADING TO PROVIDE EFFECTIVE DRAINAGE WITH A SLOPE OF NO LESS THAN ONE EIGHTH INCH (1/8") PER FOOT FLOWING AWAY FROM EQUIPMENT FOR A MINIMUM DISTANCE OF SIX FEET (6') IN ALL DIRECTIONS.

6. LOCATE ALL U.G. UTILITIES PRIOR TO ANY CONSTRUCTION.

7. COMPOUND FINISHED SURFACE TO BE FENCED

#### UNDERGROUND UTILITIES CALL 2 WORKING DAYS BEFORE YOU DIG INDIANA 1-800-382-5544 KENTUCKY 1-800-752-6007 OR DIAL 811

UTILITIES PROTECTION SERVICE NON-MEMBERS MUST CALL DIRECTLY



PROPOSED

### LEGEND

E	EXISTING OVERHEAD ELECTRIC
T	EXISTING OVERHEAD TELEPHONE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING UNDERGROUND TELEPHONE
UE	PROPOSED UNDERGROUND ELECTRIC
UT	PROPOSED UNDERGROUND TELEPHONE
XXXX	FENCE LINE
G	POWER POLE
TELE.	TELEPHONE PEDESTAL
	WATER VALVES
ж ж	FIRE HYDRANTS
•	BOLLARDS



© PROPOSED 40'-ACCESS EASEMENT



#### LEGAL DESCRIPTION

THIS IS THE DESCRIPTION FOR CINGULAR WIRELESS, FOR AN AREA TO BE LEASED FROM THE TRACT OF LAND CONVEYED TO HIRAM AND REBECCA HENSON BY DEED OF RECORD IN DEED BOOK 211, PAGE 574 IN THE OFFICE OF THE COUNTY CLERK OF CLAY COUNTY, KENTUCKY AND FURTHER DESCRIBED AS FOLLOWS:

#### DESCRIPTION OF PROPOSED LEASE AREA AND EASEMENTS NOTE: ALL BEARINGS AND DISTANCES ARE BASED ON KENTUCKY STATE PLANE COORDINATE SYSTEM SOUTH ZONE

BEGINNING AT A FOUND ALUMINUM DISK STAMPED FORESTRY BOUNDARY, LS 680, 1971, THENCE TRAVERSING A TRACT OF LAND IN THE POSSESSION OF HIRAM AND REBECCA HENSON BY UNKNOWN RECORD SOURCE, N49'20'12"E, 1073.23 FEET TO A PIN AT THE <u>TRUE POINT OF BEGINNING</u>: THENCE WITH THE PROPOSED LEASE AREA THE NEXT FOUR CALLS, N69'45'22"W, 100.00 FEET TO A PIN; THENCE N20'14'38"E, 100.00 FEET TO A PIN; THENCE S69'45'22"E, 100.00 FEET TO A PIN; THENCE S20'14'38"W, 100.00 FEET TO THE TRUE POINT OF BEGINNING AND CONTAINING 10,000 SQUARE FEET.



LEGEND

SURVEY LINE

UTILITY POLE

TRFF

- ou -

G

0

.

- EXISTING OVERHEAD UTILITIES

SET #5 REBAR 18" LONG W/CAP

STAMPED "J CHARLES #3152"

UNLESS OTHERWISE NOTED

GRID NORTH

TRUE NORTH

01'15'08.68'

SEC SEC

A P

CIRC CIRC

• SITE	at&t
Select TEAN	It's just good business.
LANVEL BOONE PARKWAY	BTM ENGINEERING, INC. 3001 TAYLOR SPRINGS DRIVE LOUISVILLE, KENTUCKY 40220 (502) 459–8402 PHONE (502) 459–8427 FAX
LOCATION MAP NOT TO SCALE CATION S"N NORTH: 1944216.25 EAST: 2242203.64 VD BB) ELEVATION: 1628.07 (NAVD BB) LOCATION: RAILROAD SPIKE SET IN 18" POPLAR TREE	JOHN JOHN CHARLES 3152 LICENSED PROFESSIONAL LAND SURVEYOR
NOTES JBJECT TO ALL EXISTING EASEMENTS, TIONS, UTILITIES, SEWER SYSTEMS, JR LEASES WHETHER SHOWN HEREON ORT MAY REVEAL EASEMENTS OR THER SHOWN HEREON OR NOT. NOT HAVE RECORDED DEDICATED SUBJECT TO FISCAL COURTS DECISION H ROADS ARE PUBLIC ACCESS. E PROPOSED UTILITY EASEMENT IS T OF LAND THAT HAS NO KNOWN IS PRESENTLY IN THE POSSESSION CCA HENSON. THERE IS A POSSIBLE I CLAIM.	SITE NAME: HECTOR SITE I.D.: SITE ADDRESS: 339 SIZEMORE CEMETERY ROAD ONEIDA, CLAY CO., KY 40972 (LEASE AREA: 10,000 SQ. FT. PROPERTY OWNER: HIRAM & REBECCA HENSON PO BOX 35 GARRARD, KY 40941 (TAX MAP NUMBER: 132) PARCEL NUMBER: 2 (SOURCE OF TITLE:
EYOR'S CERTIFICATE THAT THIS PLAT AND SURVEY WERE MADE SION, AND THAT THE ANGULAR AND LINEAR WITNESSED BY MONUMENTS SHOWN HEREON RECT TO THE BEST OF MY KNOWLEGE AND VEY WAS MADE BY METHOD OF RANDOM SHOTS. THE UNADJUSTED CLOSURE RATIO OF REATER THAN 1:5,000. THIS SURVEY MEETS OR M STANDARDS FOR A CLASS "B" SURVEY AS STATE OF KENTUCKY PER 201 KAR 18:150. MULTION 6-30-08 PLS NO. 3152	DEED BOOK 211, PAGE 574           LATITUDE:         37' 09' 01.055"N           LONGITUDE:         83' 41' 03.667"W           NO.         REVISION/ISSUE         DATE           1         ISSUE FOR COMMENT         6/3/08           1         SURVEY PLAN         SHEET:
DATE	C-2

Exhibit C



NOTE:

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<b>h</b>	It's just good business.
	SITE NAME: SITE ID NUMBER: 09500000000000000000000000000000000000
<ul> <li>FUTURE ANTENNA CENTER</li> <li>FUTURE ANTENNA CENTER</li> <li>FUTURE ANTENNA CENTER</li> <li>FUTURE ANTENNA CENTER</li> <li>TO TOP OF PROPOSED LIGHTNING ARRESTOR</li> </ul>	ONE DA, KY 40972         ONE DA, KY 40972         LATITUDE:       37' 09' 01.055"N         LONGITUDE:       B3' 41' 03.667"W         TAX MAP NUMBER:       132         PARCEL NUMBER:       2         SOURCE OF TITLE:       2         DEED BOOK 211, PAGE 574         PROPERTY OWNER:         HIRAM & REBECCA HENSON         PO BOX 35         GARRARD, KY 40941         (606) 598–1374
300'0" TO TOP OF	NO. REVISION/ISSUE DATE 1 ISSUE FOR COMMENT 08/05/08 2 ISSUE FOR ZONING 12/03/08 3 REISSUE FOR ZONING 12/15/08 TITLE: NORTH & SOUTH ELEVATIONS
II	SHEET: Z-5



NOTE:

	atet
<b>h</b>	It's just good business.
CENTER	SITE ID NUMBER:
ERERERERERERERERERERERERERER ES ANTENNANING ARRESTOR	SITE ADDRESS: 339 SIZEMORE CEMETERY RD ONEIDA, KY 40972 LATITUDE: 37° 09' 01.055"N LONGITUDE: 83° 41' 03.667"W (TAX MAP NUMBER: 132)
JENTE JENTE JIGHTI JIGHTI	(PARCEL NUMBER:
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NTEN NTEN NTEN NER ∉ VER ∉	SOURCE OF TITLE:
FUTURE / FUT	PROPERTY OWNER: HIRAM & REBECCA HENSON PO BOX 35 GARRARD, KY 40941 (606) 598–1374
0 10 10	NO. REVISION/ISSUE DATE
	1 ISSUE FOR COMMENT 08/05/08
-,00£	2 ISSUE FOR ZONING 12/03/08
	3 REISSUE FOR ZONING 12/15/08
	EAST & WEST ELEVATIONS
	SHEET: Z-6

Exhibit D

Structural Design Report         300' S3TL Series HD1 Self-Supporting Tower         located at: Hector, KY         Prepared for: NSORO LLC         by: Sabre Towers & Poles
Structural Design Report 300' S3TL Series HD1 Self-Supporting Tower located at: Hector, KY prepared for: NSORO LLC by: Sabre Towers & Poles ™
Jocated at: Hector, KY prepared for: NSORO LLC by: Sabre Towers & Poles <sup>™</sup>
prepared for: NSORO LLC by: Sabre Towers & Poles <sup>™</sup>
prepared for: NSORO LLC by: Sabre Towers & Poles <sup>™</sup>
prepared for: NSORO LLC by: Sabre Towers & Poles <sup>™</sup>
by: Sabre Towers & Poles
Job Number: 09-11225
December 2, 2008
Tower Profile 1
Foundation Design Summary 2
Maximum Leg Loads 3
Maximum Diagonal Loads 4
Maximum Foundation Loads
Calculations A1 A12
CONTRACTOR OF
TINDALL * 20897 E
Tower by TED
Foundation by <u>PERS</u>
Approved by KT



Project: C:\Output\S3TLHD1\\~09-11225.10D



No.: 09-11225 Page: 2 Date: 12/2/08 By: REB

#### Customer: NSORO LLC Site: Hector, KY

#### 300 ft. Model S3TL Series HD1 Self Supporting Tower At 90 mph Wind with no ice and 30 mph Wind with 0.75 in. Ice per ANSI/TIA-222-G-2005. Antenna Loading per Page 1



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.

DRAWFORCE Ver 2.0 (c) Guymast Inc. 2006 Phone: (416) 736-7453

Licensed to: Sabre Towers And Poles

25 nov 2008 11:26:57



DRAWFORCE Ver 2.0 (c) Guymast Inc. 2006 Phone: (416) 736-7453 Licensed to: Sabre Towers And Poles 25 nov 2008 11:26:57

Maximum



DRAWFORCE Ver 2.0 (c) Guymast Inc. 2006 Phone: (416) 736-7453

25 nov 2008

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Licensed to: Sabre Towers And Poles
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Maximum

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09-	11	22	5		txt	
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MAST G- Latticed Tower Analysis (Unguyed) (c)2005 Guymast Inc. 416-736-7453 Processed under license at:

Sabre Towers And Poles

on: 25 nov 2008 at: 11:16:55 

#### MAST GEOMETRY ( ft )

\_\_\_\_\_

PANEL TYPE	NO.OF LEGS	ELEV.AT BOTTOM	ELEV.AT TOP	F.WAT BOTTOM	F.WAT TOP	TYPICAL PANEL HEIGHT
X	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	$\begin{array}{c} 295.00\\ 280.00\\ 275.00\\ 260.00\\ 255.00\\ 240.00\\ 220.00\\ 200.00\\ 180.00\\ 160.00\\ 140.00\\ 120.00\\ 100.00\\ 80.00\\ 60.00\\ 40.00\\ 33.33\\ 20.00\\ \end{array}$	300.00 295.00 280.00 275.00 260.00 255.00 240.00 200.00 180.00 160.00 140.00 120.00 100.00 80.00 60.00 40.00 33.33	5.00 5.00 5.00 5.00 7.00 9.00 11.00 13.00 15.00 17.00 19.00 21.00 23.00 25.00 27.00 27.67 29.00	5.00 5.00 5.00 5.00 5.00 5.00 7.00 9.00 11.00 13.00 15.00 17.00 19.00 21.00 23.00 25.00 27.00 27.00	5.00 5.00 5.00 5.00 5.00 5.00 5.00 6.67 6.67 10.00 1
V A	3	13.33	20.00	29.67 31.00	29.00 29.67	6.67 13.33

#### MEMBER PROPERTIES \_\_\_\_

MEMBER TYPE	BOTTOM ELEV ft	TOP ELEV ft	X-SECTN AREA in.sq	RADIUS OF GYRAT in	ELASTIC MODULUS ksi	THERMAL EXPANSN /deg
LE LE LE LE LE LE DI DI DI DI DI	$\begin{array}{c} 280.00\\ 260.00\\ 240.00\\ 220.00\\ 200.00\\ 160.00\\ 120.00\\ 0.00\\ 280.00\\ 260.00\\ 260.00\\ 220.00\\ 180.00\\ 160.00\\ 140.00\\ 100.00\\ 100.00\\ \end{array}$	300.00 280.00 260.00 240.00 220.00 200.00 160.00 120.00 300.00 280.00 260.00 220.00 180.00 160.00 140.00	$1.075 \\ 3.016 \\ 4.407 \\ 4.299 \\ 6.111 \\ 7.952 \\ 8.399 \\ 12.763 \\ 0.484 \\ 0.715 \\ 0.484 \\ 0.902 \\ 1.090 \\ 1.438 \\ 1.688 \\ 1.6$	$\begin{array}{c} 0.787\\ 0.787\\ 0.787\\ 0.787\\ 0.787\\ 0.787\\ 0.787\\ 0.787\\ 0.787\\ 0.626\\ 0.$	29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000.	0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116 0.0000116
DI	33.33	40.00	1.812	0.626	29000.	0.0000116

Page Al

			09-1.	1225.txt	
DI	20.00	33.33	2.062	0.626	29000, 0.0000116
DI	13.33	20.00	2.402	0.626	29000. 0.0000116
DI	0.00	13.33	2.559	0.626	29000. 0.0000116
НО	295.00	300.00	0.484	0.626	29000. 0.0000116
HO	275.00	280.00	0.715	0.626	29000. 0.0000116
НО	255.00	260.00	0.484	0.626	29000. 0.0000116
НО	20.00	33.33	2.402	0.626	29000. 0.0000116
НО	0.00	13.33	2.402	0.626	29000. 0.0000116
BR	20.00	33.33	1.438	0.000	29000. 0.0000116
BR	0.00	13.33	1.438	0.000	29000. 0.0000116

FACTORED MEMBER RESISTANCES

BOTTOM	TOP	L	EGS	DIAC	SONALS	HORIZ	ONTALS	INT	BRACING
ELEV	ELEV	COMP	TENS	COMP	TENS	COMP	TENS	COMP	TENS
ft	ft	kip	kip	kip	kip	kip	kip	kip	kip
			•		•	•	,	•	•
295.0	300.0	31.48	48.15	6.39	6.39	5.82	5.82	0.00	0.00
280.0	295.0	31.48	48.15	6.39	6.39	0.00	0.00	0.00	0.00
275.0	280.0	110.98	135.90	9.58	9.58	8.46	8.46	0.00	0.00
260.0	275.0	110.98	135.90	9.58	9.58	0.00	0.00	0.00	0.00
255.0	260.0	175.98	198.45	6.39	6.39	5.82	5.82	0.00	0.00
240.0	255.0	175.98	198.45	6.39	6.39	0.00	0.00	0.00	0.00
220.0	240.0	179.61	193.50	5.63	5.63	0.00	0.00	0.00	0.00
200.0	220.0	239.46	274.95	9.84	9.84	0.00	0.00	0.00	0.00
180.0	200.0	309.64	327.10	7.46	7.46	0.00	0.00	0.00	0.00
160.0	180.0	309.64	357.75	10.34	10.34	0.00	0.00	0.00	0.00
140.0	160.0	334.65	378.00	9.19	9.19	0.00	0.00	0.00	0.00
120.0	140.0	334.65	378.00	12.53	12.53	0.00	0.00	0.00	0.00
100.0	120.0	507.33	457,90	10.73	10.73	0.00	0.00	0.00	0.00
80.0	100.0	507.33	457,90	13.43	13.43	0.00	0.00	0.00	0.00
60.0	80.0	507.33	457.90	14.31	14.31	0.00	0.00	0.00	0.00
40.0	60.0	507.33	457.90	12.68	12.68	0.00	0.00	0.00	0.00
33.3	40.0	544.40	457.90	13.57	13.57	0.00	0.00	0.00	0.00
20.0	33.3	544.40	457.90	24.82	24.82	19.36	19.36	7.52	7.52
13.3	20.0	544.40	576.00	18.24	18.24	0.00	0.00	0.00	0.00
0.0	13.3	544.40	576.00	28.49	28.49	17.34	17.34	6.69	6.69

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

90 mph wind with no ice. Wind Azimuth: 00

#### MAST LOADING

LOAD	ELEV	APPLYLOA	DAT	LOAD	FORCES	5		ENTS
TYPE	_	RADIUS	AZI	AZI	HORIZ	DOWN	VERTICAL	TORSNAL
	ft	ft			kip	kip	tt-kip	ft-kip
с	300.0	0.00	0.0	0.0	3.89	4.40	0.00	0.00
С	288.0	0.00	0.0	0.0	3.26	1.85	0.00	0.00
С	276.0	0.00	0.0	0.0	3.23	1.85	0.00	0.00
С	264.0	0.00	0.0	0.0	3.20	1.85	0.00	0.00

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$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 0.08\\ 0.08\\ 0.08\\ 0.09\\ 0.09\\ 0.09\\ 0.10\\ 0.10\\ 0.08\\ 0.08\\ 0.08\end{array}$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 0.08\\ 0.08\\ 0.08\\ 0.09\\ 0.09\\ 0.09\\ 0.10\\ 0.10\\ 0.08\\ 0.08\\ 0.08\end{array}$
D         290.0         0.00         0.0         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.01         0.005         0.04         0.03           D         285.0         0.00         0.0         0.00         0.12         0.05         0.03           D         285.0         0.00         0.0         0.0         0.13         0.06         0.03           D         280.0         0.00         0.0         0.0         0.13         0.06         0.03           D         280.0         0.00         0.0         0.15         0.10         0.03           D         275.0         0.00         0.0         0.16         0.10         0.02           D         265.0         0.00         0.0         0.18         0.11         0.01           D         260.0         0.00         0.0         0.0         0.20         0.13         0.01           D         260.0         0.00         0.0         0.20         0.13         0.01           D         240.0         0.00         0.0         0.20	$\begin{array}{c} 0.08\\ 0.09\\ 0.09\\ 0.10\\ 0.10\\ 0.08\\ 0.08\\ 0.08\\ 0.04\end{array}$
D         290.0         0.00         0.0         0.0         0.12         0.05         0.03           D         285.0         0.00         0.0         0.0         0.12         0.05         0.03           D         285.0         0.00         0.0         0.0         0.12         0.05         0.03           D         285.0         0.00         0.0         0.0         0.13         0.06         0.03           D         280.0         0.00         0.0         0.0         0.13         0.06         0.03           D         280.0         0.00         0.0         0.0         0.15         0.10         0.03           D         275.0         0.00         0.0         0.0         0.16         0.10         0.02           D         265.0         0.00         0.0         0.0         0.16         0.11         0.01           D         260.0         0.00         0.0         0.0         0.18         0.11         0.01           D         260.0         0.00         0.0         0.0         0.20         0.12         0.01           D         240.0         0.00         0.0         0.0         0.20 <td>0.09 0.09 0.10 0.10 0.08 0.08</td>	0.09 0.09 0.10 0.10 0.08 0.08
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 0.09 \\ 0.10 \\ 0.10 \\ 0.08 \\ 0.08 \\ 0.08 \\ 0.04 \end{array}$
D         285.0         0.00         0.0         0.13         0.06         0.03           D         280.0         0.00         0.0         0.0         0.13         0.06         0.03           D         280.0         0.00         0.0         0.0         0.113         0.06         0.03           D         275.0         0.00         0.0         0.0         0.15         0.10         0.03           D         275.0         0.00         0.0         0.0         0.15         0.10         0.03           D         275.0         0.00         0.0         0.0         0.16         0.10         0.02           D         265.0         0.00         0.0         0.0         0.16         0.11         0.01           D         260.0         0.00         0.0         0.0         0.18         0.11         0.01           D         260.0         0.00         0.0         0.0         0.20         0.13         0.01           D         260.0         0.00         0.0         0.0         0.20         0.13         0.01           D         240.0         0.00         0.0         0.0         0.21         0.12<	$0.10 \\ 0.10 \\ 0.08 \\ 0.08 \\ 0.08 \\ 0.04$
D         280.0         0.00         0.0         0.00         0.13         0.06         0.03           D         280.0         0.00         0.0         0.0         0.15         0.10         0.03           D         275.0         0.00         0.0         0.0         0.15         0.10         0.03           D         275.0         0.00         0.0         0.0         0.16         0.10         0.02           D         265.0         0.00         0.0         0.0         0.16         0.10         0.02           D         265.0         0.00         0.0         0.0         0.11         0.01           D         260.0         0.00         0.0         0.0         0.11         0.01           D         260.0         0.00         0.0         0.0         0.11         0.01           D         260.0         0.00         0.0         0.0         0.20         0.11         0.01           D         240.0         0.00         0.0         0.0         0.21         0.12         0.01           D         220.0         0.00         0.0         0.0         0.22         0.17         0.01	$0.10 \\ 0.08 \\ 0.08 \\ 0.04$
D       280.0       0.00       0.0       0.0       0.15       0.10       0.03         D       275.0       0.00       0.0       0.0       0.15       0.10       0.03         D       275.0       0.00       0.0       0.0       0.16       0.10       0.02         D       265.0       0.00       0.0       0.0       0.16       0.10       0.02         D       265.0       0.00       0.0       0.0       0.16       0.10       0.02         D       260.0       0.00       0.0       0.16       0.10       0.02         D       260.0       0.00       0.0       0.18       0.11       0.01         D       260.0       0.00       0.0       0.20       0.13       0.01         D       240.0       0.00       0.0       0.20       0.12       0.01         D       220.0       0.00       0.0       0.21       0.13       0.01         D       220.0       0.00       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.22       0.17       0.01         D       200.0       0.00	0.08
D       275.0       0.00       0.0       0.0       0.16       0.10       0.03         D       265.0       0.00       0.0       0.0       0.16       0.10       0.02         D       265.0       0.00       0.0       0.0       0.16       0.10       0.02         D       265.0       0.00       0.0       0.0       0.16       0.10       0.02         D       260.0       0.00       0.0       0.0       0.18       0.11       0.01         D       260.0       0.00       0.0       0.0       0.18       0.11       0.01         D       260.0       0.00       0.0       0.0       0.18       0.11       0.01         D       260.0       0.00       0.0       0.0       0.20       0.13       0.01         D       240.0       0.00       0.0       0.20       0.12       0.01         D       220.0       0.00       0.0       0.21       0.12       0.01         D       220.0       0.00       0.0       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.0       0.22       0.17	0.00
D         265.0         0.00         0.0         0.0         0.16         0.10         0.02           D         265.0         0.00         0.0         0.0         0.16         0.10         0.02           D         265.0         0.00         0.0         0.0         0.18         0.11         0.01           D         260.0         0.00         0.0         0.0         0.12         0.11           D         240.0         0.00         0.0         0.0         0.20         0.12         0.01           D         240.0         0.00         0.0         0.0         0.21         0.13         0.01           D         220.0         0.00         0.0         0.0         0.22         0.17         0.01           D         200.0         0.00         0.0         0.0         0.22         0.17 <td>11 11/1</td>	11 11/1
D         265.0         0.00         0.0         0.0         0.11         0.01           D         260.0         0.00         0.0         0.0         0.11         0.01           D         240.0         0.00         0.0         0.0         0.20         0.12         0.01           D         240.0         0.00         0.0         0.0         0.21         0.12         0.01           D         220.0         0.00         0.0         0.0         0.21         0.16         0.01           D         200.0         0.00         0.0         0.0         0.22         0.17         0.01           D         180.0         0.00         0.0	0.04
D       260.0       0.00       0.0       0.0       0.18       0.11       0.01         D       260.0       0.00       0.0       0.0       0.20       0.13       0.01         D       240.0       0.00       0.0       0.0       0.20       0.12       0.01         D       240.0       0.00       0.0       0.0       0.20       0.12       0.01         D       240.0       0.00       0.0       0.0       0.21       0.12       0.01         D       220.0       0.00       0.0       0.0       0.21       0.13       0.01         D       220.0       0.00       0.0       0.21       0.13       0.01         D       220.0       0.00       0.0       0.21       0.16       0.01         D       200.0       0.00       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.0       0.22       0.19       0.01         D       180.0       0.00       0.0       0.0       0.23       0.20       0.01         D       160.0       0.00       0.0       0.0       0.23       0.22       0.02	0.06
D       260.0       0.00       0.0       0.00       0.20       0.13       0.01         D       240.0       0.00       0.0       0.0       0.20       0.12       0.01         D       240.0       0.00       0.0       0.0       0.20       0.12       0.01         D       240.0       0.00       0.0       0.0       0.21       0.12       0.01         D       220.0       0.00       0.0       0.0       0.21       0.13       0.01         D       220.0       0.00       0.0       0.21       0.13       0.01         D       220.0       0.00       0.0       0.21       0.13       0.01         D       200.0       0.00       0.0       0.21       0.16       0.01         D       200.0       0.00       0.0       0.22       0.17       0.01         D       180.0       0.00       0.0       0.0       0.23       0.20       0.01         D       180.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.23       0.22       0.02	0.06
D       240.0       0.00       0.0       0.0       0.20       0.12       0.01         D       240.0       0.00       0.0       0.0       0.21       0.12       0.01         D       220.0       0.00       0.0       0.0       0.21       0.13       0.01         D       220.0       0.00       0.0       0.0       0.21       0.16       0.01         D       220.0       0.00       0.0       0.0       0.21       0.16       0.01         D       200.0       0.00       0.0       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.0       0.22       0.19       0.01         D       200.0       0.00       0.0       0.0       0.23       0.20       0.01         D       180.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.22       0.02       0.01         D       160.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0	0.07
D       240.0       0.00       0.0       0.0       0.21       0.12       0.01         D       220.0       0.00       0.0       0.0       0.21       0.13       0.01         D       220.0       0.00       0.0       0.0       0.21       0.16       0.01         D       220.0       0.00       0.0       0.0       0.21       0.16       0.01         D       200.0       0.00       0.0       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.0       0.22       0.19       0.01         D       200.0       0.00       0.0       0.0       0.22       0.19       0.01         D       180.0       0.00       0.0       0.0       0.23       0.20       0.01         D       180.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0	0.06
D       220.0       0.00       0.0       0.0       0.21       0.16       0.01         D       200.0       0.00       0.0       0.0       0.21       0.16       0.01         D       200.0       0.00       0.0       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.0       0.22       0.19       0.01         D       180.0       0.00       0.0       0.23       0.20       0.01         D       180.0       0.00       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.24       0.24       0.02	0.07
D       200.0       0.00       0.0       0.0       0.22       0.17       0.01         D       200.0       0.00       0.0       0.0       0.22       0.19       0.01         D       180.0       0.00       0.0       0.0       0.22       0.19       0.01         D       180.0       0.00       0.0       0.0       0.23       0.20       0.01         D       180.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.24       0.24       0.02         D       140.0       0.00       0.0       0.0       0.24       0.24       0.02	0.07
D       200.0       0.00       0.0       0.0       0.22       0.19       0.01         D       180.0       0.00       0.0       0.0       0.23       0.20       0.01         D       180.0       0.00       0.0       0.0       0.23       0.20       0.01         D       180.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.24       0.24       0.02         D       140.0       0.00       0.0       0.24       0.24       0.02	0.06
D       180.0       0.00       0.0       0.0       0.23       0.20       0.01         D       180.0       0.00       0.0       0.0       0.23       0.21       0.01         D       160.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.23       0.22       0.01         D       160.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.24       0.24       0.02         D       140.0       0.00       0.0       0.0       0.24       0.24       0.02	0.06
D       180.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.24       0.24       0.20       0.02	0.06
D       160.0       0.00       0.0       0.0       0.24       0.21       0.01         D       160.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.24       0.24       0.02         D       140.0       0.00       0.0       0.0       0.24       0.24       0.02	0.06
D       140.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.23       0.22       0.02         D       140.0       0.00       0.0       0.0       0.24       0.24       0.02	0.06
D 140.0 0.00 0.0 0.0 0.24 0.24 0.02	0.06
	0.06
	0.06
D 120.0 0.00 0.0 0.0 0.24 0.30 0.02	0.06
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.06
D = 40.0 = 0.00 = 0.0 = 0.0 = 0.25 = 0.32 = 0.02	0.05
D = 40.0 = 0.00 = 0.0 = 0.0 = 0.20 = 0.31 = 0.03	0.05
D 33.3 0.00 0.0 0.0 0.20 0.31 0.03	0.05
D 33.3 0.00 0.0 0.0 0.24 0.42 0.03	0.05
D 20.0 0.00 0.0 0.0 0.24 0.42 0.03	0.05
	0.04
D = 13.3 = 0.00 = 0.0 = 0.00 = 0.13 = 0.03 = 0.03	0.04
D 0.0 0.00 0.0 0.0 0.21 0.45 0.03	

# SUPPRESS PRINTING

LOADS INPUT	FOR DISPL	THIS LO MEMBER FORCES	ADING FOUNDN LOADS	ALL	MAX DISPL	IMUMS MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

LOADING CONDITION M

90 mph wind with no ice. Wind Azimuth: 00

MAST LOADING

LOAD TYPE	ELEV ft	APPLYLOAD RADIUS ft	AZI	LOAD AZI	09-11225.txt FORCES. HORIZ kip	DOWN kip	MOME VERTICAL ft-kip	NTS TORSNAL ft-kip
C C C C	300.0 288.0 276.0 264.0	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0$	$0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0$	3.89 3.26 3.23 3.20	3.30 1.39 1.39 1.39	$0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00$	$0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00$
	300.0 295.0 295.0 290.0 285.0 280.0 285.0 280.0 275.0 265.0 265.0 260.0 240.0 240.0 240.0 240.0 240.0 220.0 200.0 200.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 140.0 120.0 100.0 140.0 120.0 100.0 100.0 100.0 100.0 100.0 100.0 20.0 2	0.00 0.00		$\begin{array}{c} 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0$	$\begin{array}{c} 0.12\\ 0.12\\ 0.10\\ 0.10\\ 0.10\\ 0.12\\ 0.12\\ 0.13\\ 0.15\\ 0.15\\ 0.16\\ 0.16\\ 0.16\\ 0.16\\ 0.16\\ 0.18\\ 0.20\\ 0.20\\ 0.20\\ 0.21\\ 0.21\\ 0.22\\ 0.22\\ 0.22\\ 0.22\\ 0.23\\ 0.24\\ 0.24\\ 0.25\\ 0.24\\ 0.24\\ 0.24\\ 0.24\\ 0.19\\ 0.24\\ 0.19\\ 0.19\\ 0.10\\$	0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.08 0.08 0.08 0.08 0.08 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.12 0.13 0.14 0.15 0.16 0.16 0.17 0.23 0.24 0.23 0.32 0.26	$\begin{array}{c} 0.03\\ 0.03\\ 0.03\\ 0.02\\ 0.02\\ 0.02\\ 0.02\\ 0.02\\ 0.02\\ 0.02\\ 0.01\\ 0.02\\$	$\begin{array}{c} 0.08\\ 0.08\\ 0.08\\ 0.09\\ 0.09\\ 0.09\\ 0.09\\ 0.10\\ 0.08\\ 0.08\\ 0.08\\ 0.04\\ 0.06\\ 0.05\\$
D D	13.3 13.3 0.0	0.00 0.00 0.00	$0.0 \\ 0.0 \\ 0.0$	$0.0 \\ 0.0 \\ 0.0$	0.19 0.21 0.21	$0.26 \\ 0.34 \\ 0.34$	0.02 0.02 0.02	0.04 0.04 0.04

# SUPPRESS PRINTING

LOADS INPUT	FOR DISPL	THIS LO MEMBER FORCES	ADING FOUNDN LOADS	ALL	MAX DISPL	IMUMS MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

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O9-11225.txt

30 mph wind with 0.75 ice. Wind Azimuth: 00

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MAST LOADING

LOAD	ELEV	APPLYLOAD	AT	LOAD .	FORCES.			rs
ΤΥΡΕ	ft	RADIUS ft	AZI	AZI	HORIZ kip	DOWN kip	VERTICAL ft-kip	rorsnal ft-kip
c	300.0	0.00	0.0	0.0	0.51 0.42	8.82	0.00	0.00
č c	276.0 264.0	0.00 0.00	$0.0 \\ 0.0$	0.0	0.41 0.41	3.63 3.62	0.00	0.00
D	300.0	0.00	0.0	0.0	0.01	0.24	0.16	0.01
D	295.0	0.00	0.0	0.0	$0.01 \\ 0.01$	0.21 0.21	0.16 0.16	0.01 0.01
D	290.0	0.00	0.0	0.0	0.02	0.24	0.14	0.01
D	285.0	0.00	0.0	0.0	0.02	0.24	0.15	0.01
D D	280.0 280.0	$0.00 \\ 0.00$	$0.0 \\ 0.0$	$0.0 \\ 0.0$	0.02 0.02	0.26 0.35	0.15 0.13	$\begin{array}{c} 0.01 \\ 0.01 \end{array}$
D	275.0	0.00	0.0	0.0	0.02	0.35	0.13	$0.01 \\ 0.00$
D	265.0	0.00	0.0	0.0	0.02	0.35	0.05	0.00
D D	265.0	0.00	$0.0 \\ 0.0$	$0.0 \\ 0.0$	0.02	0.38	0.05	$0.01 \\ 0.01$
D	260.0	0.00	0.0	0.0	0.03	0.44 0.44	0.05	0.01 0.01
D	255.0	0.00	0.0	0.0	0.03	0.41	0.05	0.01
D D	240.0	0.00	0.0	0.0	0.03	0.42	0.05	0.01
D D	220.0	$0.00 \\ 0.00$	$0.0 \\ 0.0$	$0.0 \\ 0.0$	0.03 0.03	$0.45 \\ 0.48$	0.05	$\substack{0.01\\0.01}$
D	200.0	0.00	0.0	0.0	0.03	0.50	0.06	0.01
D	180.0	0.00	0.0	0.0	0.03	0.54	0.07	0.01
D D	$180.0 \\ 160.0$	$0.00 \\ 0.00$	$0.0 \\ 0.0$	$0.0 \\ 0.0$	0.03 0.03	0.58	$0.09 \\ 0.08$	$\begin{array}{c} 0.01 \\ 0.01 \end{array}$
D	160.0	0.00	0.0	0.0	0.03	0.57	0.10	0.01
D	140.0	0.00	0.0	0.0	0.03	0.61	0.11	0.01
D D	120.0 120.0	0.00	$0.0 \\ 0.0$	$0.0 \\ 0.0$	0.03	0.62	0.10 0.12	$0.01 \\ 0.01$
D D	$100.0 \\ 100.0$	0.00	0.0	$0.0 \\ 0.0$	0.03	0.69 0.73	0.12 0.13	$0.01 \\ 0.01$
D	80.0	0.00	0.0	0.0	0.03	0.74	0.13	0.01
D	60.0	0.00	$0.0 \\ 0.0$	0.0	0.03	0.75	$0.14 \\ 0.14$	$0.01 \\ 0.01$
D D	60.0 40.0	$0.00 \\ 0.00$	$0.0 \\ 0.0$	$\begin{array}{c} 0.0\\ 0.0\end{array}$	0.03 0.03	0.76 0.77	$\begin{array}{c} 0.15 \\ 0.14 \end{array}$	$\begin{array}{c} 0.01 \\ 0.01 \end{array}$
D	40.0 33 3	0.00	0.0	0.0	0.05	0.67	0.15	0.01
D	33.3	0.00	0.0	0.0	0.03	0.95	0.15	0.01
D D	20.0	0.00	$0.0 \\ 0.0$	0.0	0.03 0.04	0.95 0.72	0.15	$0.01 \\ 0.01$
D D	13.3 13.3	0.00	0.0	0.0	0.04	0.72 1.01	0.17 0.23	0.01
~	2.9.9	0.00	0.0	0.0	Page A5	<b>T</b> • <b>A</b> T	$\mathbf{U} \bullet \mathbf{L} \mathbf{J}$	0.UL

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D	0.0	0.00	0.0	0.0	0.03	1.01	0.23	0.01

\_\_\_\_\_<sup></sup>

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 	 	******	 -	-	 		_		 	-	

LOADS INPUT	FOR DISPL	THIS LO MEMBER FORCES	ADING FOUNDN LOADS	ALL	DISPL	IMUMS MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

#### MAXIMUM MAST DISPLACEMENTS:

#### 

ELEV ft	DEF NORTH	LECTIONS (f	t) DOWN	TILTS NORTH	(DEG) EAST	TWIS⊤ DEG
$\begin{array}{c} \text{Tt} \\ 300.0 \\ 295.0 \\ 290.0 \\ 285.0 \\ 280.0 \\ 275.0 \\ 265.0 \\ 265.0 \\ 265.0 \\ 265.0 \\ 265.0 \\ 265.0 \\ 255.0 \\ 240.0 \\ 235.0 \\ 235.0 \\ 220.0 \\ 235.0 \\ 230.0 \\ 235.0 \\ 230.0 \\ 235.0 \\ 200.0 \\ 193.3 \\ 186.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 193.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 166.7 \\ 180.0 \\ 173.3 \\ 160.0 \\ 100.0 \\$	NORTH 4.909 G 4.702 G 4.499 G 4.294 G 4.096 G 3.903 G 3.716 G 3.531 G 3.535 G 3.186 G 2.870 G 2.723 G 2.580 G 2.446 G 2.317 G 2.196 G 2.043 G 1.899 G 1.763 G 1.634 G 1.781 G 1.781 G 1.781 G 1.771 G 0.940 G 0.815 G 0.701 G 0.600 G 0.508 G 0.2778 G 0.2172 G 0.162 G 0.007 G 0.007 G	EAST -4.683 D -4.291 D -4.095 D -3.906 D -3.722 D -3.543 D -3.366 D -3.198 D -2.883 D -2.734 D -2.593 D -2.457 D -2.329 D -2.457 D -2.329 D -2.089 D -1.944 D -1.806 D -1.553 D -1.324 D -1.217 D -1.676 D -0.665 D -0.665 D -0.569 D -0.481 D -0.329 D -0.263 D -0.263 D -0.263 D -0.263 D -0.263 D -0.263 D -0.263 D -0.263 D -0.263 D -0.265 D	DOWN 0.071 G 0.067 G 0.062 G 0.058 G 0.050 G 0.050 G 0.047 G 0.047 G 0.041 G 0.038 G 0.035 G 0.031 G 0.029 e 0.028 e 0.029 e 0.028 e 0.029 e 0.028 e 0.029 e 0.028 e 0.029 e 0.0019 e 0.0119 e 0.0119 e 0.0119 e 0.0119 e 0.0119 e 0.0119 e 0.0119 e 0.0019 e 0.0019 e 0.0019 e 0.0019 e 0.0019 e 0.0019 e 0.0019 e 0.0019 e 0.0000 f 0.0000 f 0.0000 f 0.0000 f	NORTH 2.356 G 2.349 G 2.279 G 2.201 G 2.161 G 2.103 G 2.103 G 1.929 G 1.929 G 1.855 G 1.782 G 1.632 G 1.632 G 1.478 G 1.632 G 1.478 G 1.255 G 1.1554 G 1.255 G 1.1255 G 1.1255 G 1.1255 G 0.909 O 0.859 G 0.809 G 0.809 O 0.859 G 0.528 G 0.483 G 0.394 G 0.394 G 0.306 G 0.262 G 0.173 G 0.146 G 0.058 G 0	EAST -2.252 D -2.245 D -2.221 D -2.178 D -2.065 D -2.000 D -1.938 D -1.938 D -1.774 D -1.774 D -1.704 D -1.631 D -1.631 D -1.485 D -1.412 D -1.485 D -1.412 D -1.339 D -1.266 D -1.485 D -1.412 D -1.64 D -0.915 D -0.866 D -0.819 D -0.770 D -0.635 D -0.568 D	-0.246 R -0.245 R -0.245 R -0.235 R -0.227 R -0.227 R -0.220 R -0.213 R -0.195 R -0.195 R -0.181 R -0.181 R -0.168 R -0.168 R -0.145 R -0.125 R -0.125 R -0.125 R -0.125 R -0.125 R -0.106 R -0.106 L 0.004 L 0.0061 L 0.043 F -0.031 F -0.021 F -0.021 F -0.021 F -0.021 F -0.021 F -0.021 L 0.004 L
0.0	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A

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# MAXIMUM TENSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
300.0	1 74 44		0.72 K	0.00 A
295.0	£ 22 M	1.92 N	0.07 A	0.00 A
290.0	12 64 M	2.39 H	0.03 S	0.00 A
285.0	12.04 M 		0.07 A	0.00 A
280.0	22.20 M	4.04 H	0.75 A	0.00 A
275.0	JZ.OU M	5.29 M	0.11 A	0.00 A
270.0	62 37 M	0.05 H	0.02 5	0.00 A
265.0	03.27 M	/.U0   	0.11 A	0.00 A
260.0	07.95 M	0.79 H	0.62 S	0.00 A
255.0	97.85 M	) 24 M د 15 C	0.08 A	0.00 A
250.0	110.32 M	G	0.01 A	0.00 A
245.0	120 20 M	4.90 M	0.06 A	0.00 A
240.0	130.39 M	4.03 G	0.01 A	0.00 A
235.0	148 24 M	4.72 M	0.05 A	0.00 A
230.0	156 22 M	4.79 п  л 76 т	0.02 A	0.00 A
225.0	150.25 M	4.70 T	0.04 A	0.00 A
220.0	172 42 M	4.07 П  5 27 Т	0.05 A	0.00 A
213.3	102 01 M		0.06 A	0.00 A
206.7	102 48 M	у.40 п  5 52 т	0.04 A	0.00 A
200.0	203 40 M	у, уу т  5 71 ц	0.05 A	0.00 A
193.3	203.40 M	5.71 II  5 83 T	0.03 A	0.00 A
186.7	212.04 M	с 03 ц	0.04 A	0.00 A
180.0	222.17 H	6 20 т	0.03 A	0.00 A
173.3	240 55 M	6 44 н	0.08 A	0.00 A
166.7	249 50 M	6 66 т	0.03 A	0.00 A
160.0	245.00 м	7 59 T	0.09 A	0.00 A
150.0	274 50 м	7 86 т	0.08 A	0.00 A
140.0			0.07 A Page A7	0.00 A

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130.0	288.08 M	8.20 T	0.09 4	0 00 4
120.0	301.46 M	8.53 T		0.00 4
120.0	314.95 M	8.90 т	0.06 A	0.00 A
110.0	328 19 м	9 74 т	0.05 A	0.00 A
100.0	241 EE M	0 64 T	0.06 A	0.00 A
90.0	341.50 M	9.04 1	0.05 A	0.00 A
80.0	354.83 M	10.03 т	0.05 A	0.00 A
70.0	368.22 M	10.44 T		
70.0	381.54 M	10.83 т	0.05 A	0.00 A
60.0	394.97 м	11.23 N	0.01 e	0.00 A
50.0	408 21 M	11 60 т	0.07 S	0.00 A
40.0	408.31 M	11.00 T	0.23 A	0.00 A
33.3	424.11 M	12.26 N	0.85 M	0.00 s
20.0	423.15 M	15.97 N	0 15 4	0.00 c
20.0	450.25 M	12.84 T	0.15 A	0.00 5
13.3	449.21 M	16.31 т	0.76 M	0.00 I
0.0			0.00 A	0.00 A

### MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
300.0	-3 63 6	 -2 11 н	-0.58 Q	0.00 A
295.0	-9 43 G	-2.23 N	-0.04 S	0.00 A
290.0	-16.25 G	-3.61 H	-0.04 A	0.00 A
285.0	-26.99 G	-4.43 T	-0.05 s	0.00 A
280.0	-37.63 G	-5.56 G	-0.72 5	0.00 A
275.0	-54.31 G	-6.70 T	-0.08 S	0.00 A
270.0	-70.47 G	-7.20 Н	-0.03 A	0.00 A
265.0	-90.80 G	-8.70 т	-0.09 s	0.00 A
260.0	-107.47 G	-5.62 G	-0.80 A	0.00 A
255.0	-120.97 G	-4.94 T	-0.07 5	0.00 A
250.0	-130.90 G	-5.13 G	-0.01 5	0.00 A
245.0	یون های ولی است. است است است است این این ۲۰۰ می این این این این این این این این این ای	<b></b>	-0.06 S Page A8	0.00 A

			09-11225.txt	
240.0	-142.25 G	-4.75 T	-0.01 S	0.00 A
235.0	-151.29 G	-4.93 G	-0.05 s	0.00 A
230.0	-161.33 G	-4.73 T	-0.02 5	0.00 A
225.0	-169.82 G	-4.92 G	-0.04 5	0.00 A
220.0	-179.08 G	-4.83 T	-0.04 5	0.00 A
213 3	-188.51 G	-5.48 G	-0.05.5	
206.7	-200.18 G	-5.42 т	-0.04 s	
200.7	-210.70 G	-5.64 G	-0.04 5	
102.2	-221.85 G	-5.69 T	-0.04 3	0.00 A
192.2	-232.22 G	-5.90 G	-0.02 S	0.00 A
100.7	-243.05 G	-6.01 T	-0.04 5	0.00 A
180.0	-253.32 G	-6.25 H	-0.03 S	0.00 A
173.3	-264.02 G	-6.44 T	-0.07 S	0.00 A
166.7	-274.39 G	-6.70 н	-0.02 s	0.00 A
160.0	-287.55 G	-7.61 н	-0.09 S	0.00 A
150.0	-303.16 G	-7.91 H	-0.07 S	0.00 A
140.0	-318.99 G	-8.21 H	-0.06 S	0.00 A
130.0	-334.63.6	-8.58 H	-0.08 5	0.00 A
120.0	-350 65 G	-8 92 H	-0.05 S	0.00 A
110.0	-366 57 G	-9 30 н	-0.04 s	0.00 A
100.0	-382 77 G	_9 67 u	-0.05 s	0.00 A
90.0	- 302 02 C	10.08 11	-0.04 \$	0.00 A
80.0	-190.93 G	-10.08 H	-0.05 s	0.00 A
70.0	-413.33 G	-10.47 H	-0.04 s	0.00 A
60.0	-451.00 G	-10.00 H	-0.01 Y	0.00 A
50.0	-448.25 G	-11.25 H	-0.08 A	0.00 A
40.0	-464.74 G	-11.64 H	-0.21 s	0.00 A
33.3	-483.49 G	-12.33 H	-1.02 G	0.00 N
20.0	-484.77 G	-16.02 H	-0.13 s	0.00 N
13.3	-516.61 G	-12.92 H	-0.93 G	0.00 G
0.0	-518.00 G	-16.36 H	0.00 A	0.00 A

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#### MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)

	LOADCO	MPONENTS		TOTAL
NORTH	EAST	DOWN	UPLIFT	SHEAR
51.12 G	43.62 K	5 <b>38.45</b> G	-466.28 M	51.12 G

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

H	ORIZONTA	L	DOWN		OVERTURNING	]	TORSION
NORTH	EAST	TOTAL		NORTH	EAST	TOTAL	
	(d	0.0				@ 0.0	
84.6 S	-79.3 D	84.6 S	199.1 f	13737.1 G	-13002.3 D	13737 <b>.1</b> G	47.0 L
#### PIER AND PAD DESIGN BY SABRE TOWERS & POLES

Tower Description 300' S3TL Series HD1 Customer NSORO LLC Project Number 09-11225 Date 12/2/2008 Engineer REB



# PIER AND PAD DESIGN BY SABRE TOWERS & POLES (CONTINUED)

Pier Design (Continued) :			
Maximum Spacing (in)	7.85	(Only if Shear Ties are Required)	
Actual Hook Development (in)	13.25	Req'd Hook Development I <sub>dh</sub> (in)	11.62
		*** Ref. ACI 11.5.5 & 11.5.6.3	
Anchor Bolt Pull-Out			
$dP_{-} = d\lambda (2/3) f_{-}^{1/2} (2.8A_{P_{-}} - 2F_{-} + 4A_{P_{-}} - 2F_{-})$		P. (kins)	468-2
Pier Rehar Development Length (in)		Required Length of Development (in)	0/ 22
Two-Way Shear Action:		required congained bevelopment (in)	
	2 05		
Average d (in)	14 13		
$\phi V_{\alpha}$ (kips)	707.0	V. (kips)	678.4
$\phi V_{1} = \phi (2 + 4/\beta_{1}) f_{1}^{1/2} h_{1} d_{1}$	1061.0		
$\psi_{c} \psi_{c} \psi_{c} + \eta_{c} \psi_{c} = 0.000$	780.7		
$\psi v_c = \psi(u_s \alpha i b_0, 2) i_c = b_0 \alpha$	702.7		
$\varphi v_c - \varphi q_c D_c Q_c$	101.3		
Snear perimeter, $p_o$ (in)	232.87		
β <sub>c</sub>	1		
One-Way Shear:			Anningogowingszar
φV <sub>c</sub> (kips)	346.3	V <sub>u</sub> (Kips)	237.8
Flexure:			*********
φM <sub>n</sub> (ft-kips)	1055.5	M <sub>u</sub> (ft-kips)	1033.0
a (in)	1.35		
Steel Ratio	0.00541		
β <sub>1</sub>	0.85		
Maximum Steel Ratio	0.0214		
Minimum Steel Ratio	0.0018		aunar (* sur Prezide
Rebar Development in Pad (in)		Required Development in Pad (in)	40.98
Condition	1 is OK 0 Fails		
Maximum Soil Bearing Pressure	1		
Maximum Width of Pad	1		
Uplift	1		
Pier Area of Steel	1		
Pier Shear	1		
Anchor Bolt Pull-Out	1		
Two-Way Shear Action	1		
One-way Shear	1		
Jueer Kallo			
Interaction Diagram Visual Check	1		
Hook Development	1		

Exhibit E

August 25, 2005

General Dynamics 9900 Corporate Campus Drive Louisville, Kentucky 40223

Attention: Steve Parker

Re: Geotechnical Engineering Report Proposed Hector Communication Tower Bear Creek Road Hector, Kentucky Terracon Project No. 57055023

Dear Mr. Parker:

We are submitting, herewith, the results of our subsurface exploration for the referenced project. The purpose of this exploration was to obtain information on subsurface conditions at the proposed project site and, based on this information, to provide recommendations regarding the design and construction of foundations for the proposed tower.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service to you in any way, please feel free to contact us.

Sincerely, **Tlerracon** 

Rout p. Kar ful

Erich J. Hoehler Project Engineer

n:\projects\2005\geotechnical\57055023\g57055023.doc

Attachments: Geotechnical Engineering Report

Copies: (4) General Dynamics





**Consulting Engineers & Scientists** 

Terracon Consultants, Inc. 4545 Bishop Lane, Suite 101 Louisville, Kentucky 40218 Phone 502.456.1256 Fax 502.456.1278 www.terracon.com

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## APPENDIX

Boring Location Plan
Boring Logs
General Notes
General Notes – Description of Rock Properties
Unified Soil Classification System

#### **GEOTECHNICAL ENGINEERING REPORT**

PROPOSED HECTOR COMMUNICATION TOWER BEAR CREEK ROAD HECTOR, KENTUCKY TERRACON PROJECT NO. 57055023 August 25, 2005

#### **1.0 INTRODUCTION**

The purpose of this report is to describe the subsurface conditions encountered in the borings, analyze and evaluate the test data, and provide recommendations regarding the design and construction of foundations and earthwork for the proposed tower. Three (3) borings extending to depths of about 21 to 25 feet below the existing ground surface were drilled at the site. Boring logs and a boring location plan are included with this report.

#### 2.0 PROJECT DESCRIPTION

Terracon understands the proposed project will consist of the construction of a 300-foot self supporting tower. Exact tower loads are not available, but based on our past experience are anticipated to be as follows:

Vertical Load:	650 kips
Horizontal Shear:	100 kips
Uplift:	550 kips

A small, lightly loaded equipment building will also be constructed. Wall and floor loads for this building are not anticipated to exceed 1 kip per linear foot and 100 pounds per square foot, respectively. At the time of the site visit, the property was a relatively flat, wooded hilltop. Based on the proposed tower construction, minimal grading operations are anticipated.

#### 3.0 EXPLORATION PROCEDURES

#### 3.1 Field Exploration

The subsurface exploration consisted of drilling and sampling three borings at the site to depths of about 21 to 25 feet below existing grade. The boring locations and depths were selected by General Dynamics. The actual boring locations were determined by a subcontract driller, who paced distances in the field based on the center of the tower staked by the project surveyor. Right angles for the boring location measurements were estimated. Ground surface elevations were not available at the time of this report and have been omitted from the boring logs. The location of the boring should be considered accurate only to the degree implied by the means and methods used to define them.

1

Hector Communication Tower Hector, Kentucky Terracon Project No.: 57055023 August 25, 2005

The borings were drilled with an ATV-mounted rotary drill rig using hollow stem augers to advance the boreholes. Representative soil samples were obtained by the split-barrel sampling procedure in general accordance with the appropriate ASTM standard. In the split-barrel sampling procedure, the number of blows required to advance a standard 2-inch O.D. split-barrel sampler the last 12 inches of the typical total 18-inch penetration by means of a 140-pound hammer with a free fall of 30 inches, is the standard penetration resistance (SPT) value (N-Value). This value is used to estimate the in-situ relative density of cohesionless soils and the consistency of cohesive soils. The sampling depths, penetration distance, and standard penetration resistance values are shown on the boring logs. The samples were sealed and delivered to the laboratory for testing and classification.

Auger refusal was encountered in all borings at depths ranging from 6 to 10 feet below the existing ground surface. The borings were extended into the refusal materials using a diamond bit attached to the outer barrel of a double core barrel. The inner barrel collected the cored material as the outer barrel was rotated at high speeds to cut the rock. The barrel was retrieved to the surface upon completion of each drill run. Once the core samples were retrieved, they were placed in a box and logged. The rock was later classified by an engineer and the "percent recovery" and rock quality designation (RQD) were determined.

The "percent recovery" is the ratio of the sample length retrieved to the drilled length, expressed as a percent. An indication of the actual in-situ rock quality is provided by calculating the sample's RQD. The RQD is the percentage of the length of broken cores retrieved which have core segments at least 4 inches in length compared to each drilled length. The RQD is related to rock soundness and quality as illustrated below:

Relation of RQD and In-situ Rock Quality					
RQD (%) Rock Quality					
90 - 100	Excellent				
75 - 90	Good				
50 - 75	Fair				
25 - 50	Poor				
0 -25	Very Poor				

Table 1 – Rock Quality Designation (RQD)

Field logs of each boring were prepared by a subcontract driller. The logs included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. The final boring logs included

Hector Communication Tower Hector, Kentucky Terracon Project No.: 57055023 August 25, 2005

with this report represent an interpretation of the driller's field logs and a visual classification of the soil samples made by the Geotechnical Engineer.

#### 3.2 Laboratory Testing

The samples were classified in the laboratory based on visual observation, texture and plasticity. The descriptions of the soils indicated on the boring logs are in accordance with the enclosed General Notes and the Unified Soil Classification System. Estimated group symbols according to the Unified Soil Classification System are given on the boring logs. A brief description of this classification system is attached to this report.

The laboratory testing program consisted of performing water content tests on representative soil samples. Information from these tests was used in conjunction with field penetration test data to evaluate soil strength in-situ, volume change potential, and soil classification. Results of these tests are provided on the boring logs.

Classification and descriptions of rock core samples are in accordance with the enclosed General Notes, and are based on visual and tactile observations. Petrographic analysis of thin sections may indicate other rock types. Percent recovery and rock quality designation (RQD) were calculated for these samples and are noted at their depths of occurrence on the boring logs.

#### 4.0 EXPLORATORY FINDINGS

#### 4.1 Subsurface Conditions

Conditions encountered at the boring locations are indicated on the boring logs. Stratification boundaries on the boring logs represent the approximate location of changes in soil types and the transition between materials may be gradual. Water levels shown on the boring logs represent the conditions only at the time of our exploration. Based on the results of the borings, subsurface conditions on the project site can be generalized as follows.

The tower compound was cleared of the topsoil and trees prior to our field exploration. Lean clay (CL) was encountered in all borings at the surface to a depth of about 2 ½ feet below existing grade. Coal and or severely weathered shale were encountered below the clay to refusal depths of about 6 to 10 feet.

Below the refusal depths of about 6 to 10, rock coring techniques were used to advance the boreholes. The core samples recovered from our borings consisted of moderately to severely weathered, brown and gray, very soft to moderately hard shale. A coal seam was encountered in boring B-3 at a depth of about 11 to 11 ½ feet. Core recoveries at the site

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ranged from 70 to 100 percent. The quality of the rock is rated at very poor to poor based on RQD values of 0 to 48 percent.

#### 4.2 Site Geology

A review of the Geologic Map of Barcreek, Kentucky Quadrangle published by the United States Geological Survey (USGS), indicates that the site is underlain by the Haddix coal zone of the Breathitt Formation. The Haddix coal zone is made up of sandstone, siltstone, shale and coal. The sandstone is described as light to medium gray weathering yellowish gray, fine to medium grained interbedded with shale and siltstone. The shale and siltstone are described as medium to dark medium gray weathering yellowish gray to yellowish brown and thick bedded. The Haddix coal zone can be over 230 feet thick and is underlain by the Magoffin Member.

#### 4.3 Groundwater Conditions

No groundwater was encountered during the auger drilling portion of the boreholes. Water was used to advance the boreholes during rock coring operations. The introduction of water into the boreholes precluded obtaining accurate groundwater level readings at the time of drilling operations. Long term observation of the groundwater level in monitoring wells, sealed from the influence of surface water, would be required to obtain accurate groundwater levels on the site.

It should be recognized that fluctuations of the groundwater table may occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

#### 5.0 ENGINEERING RECOMMENDATIONS

Based on the encountered subsurface conditions, the tower and equipment building can be constructed on shallow foundations. Shallow foundation recommendations are presented in the following paragraphs.

#### 5.1 Tower Foundation

A mat foundation can be used to support the proposed tower. The mat foundation can be designed using the following natural soil/engineered fill parameters. These parameters are based on the findings of the borings, a review of published correlation values and Terracon's experience with similar soil conditions. These design parameters also assume that the base

of the mat foundation will rest on natural soils, weathered shale or well-graded crushed stone that is compacted and tested on a full time basis. Any coal encountered or observed at or below the bearing surface should be undercut to shale and backfilled with crushed stone.

Table 2	- Mat	Foundation	Design	Parameters
---------	-------	------------	--------	------------

Depth (feet)	Description	Allowable Contact Bearing Pressure (psf)	Allowable Passive Pressure (psf)	Coefficient of Friction, Tan $\delta$	Vertical Modulus of Subgrade Reaction (pci)
0-3	Lean Clays	Ignore	Ignore		
≥ 3	Weathered Shale or Crushed Stone Fill	3,000	Ignore	0.35	150

To assure that soft soils or coal are not left under the mat foundation, it is recommended that a geotechnical engineer observe the foundation subgrade prior to concrete placement. Provided the above recommendations are followed, total mat foundation settlements are not anticipated to exceed about 1 inch. Differential settlement should not exceed 50 percent of the total settlement.

#### 5.2 Equipment Building Foundations

The proposed equipment shed may be supported on shallow footings bearing on stiff natural soils. The equipment building foundations should be dimensioned using a net allowable soil bearing pressure of 2,000 pounds per square foot (psf). In using net allowable soil pressures for footing dimensioning, the weight of the footings and backfill over the footings need not be considered. Furthermore, the footings should be at least 12 inches wide and a minimum of 2.0 feet square.

The geotechnical engineer or a qualified representative should observe the foundation excavations to verify that the bearing materials are suitable for support of the proposed loads. If, at the time of such observation, any soft soils are encountered at the design foundation elevation, the excavations should be extended downward so that the footings rest on stiff soils. If it is inconvenient to lower the footings, the proposed footing elevations may be re-established by backfilling after the undesirable material has been removed.

The recommended soil bearing value should be considered an upper limit, and any value less than that listed above would be acceptable for the foundation system. Using the value given, total settlement would be about 1 inch or less with differential settlements being less than 75 percent of total settlement. Footings should be placed at a depth of 2.0 feet, or greater, below finished exterior grade for protection against frost damage.

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#### 5.3 Parking and Drive Areas

The drive that accesses the site will be surfaced with crushed stone. Parking and drive areas that are surfaced with crushed stone should have a minimum thickness of 6 inches and be properly placed and compacted as outlined herein. The crushed stone should meet Kentucky Transportation Cabinet specifications and applicable local codes.

A paved section consisting only of crushed graded aggregate base course should be considered a high maintenance section. Regular care and maintenance is considered essential to the longevity and use of the section. Site grades should be maintained in such a manner as to allow for adequate surface runoff. Any potholes, depressions or excessive rutting that may develop should be repaired as soon as possible to reduce the possibility of degrading the soil subgrade.

#### 5.4 Site Preparation

Site preparation should begin with the removal of any topsoil, loose, soft or otherwise unsuitable materials from the construction area. The geotechnical engineer should evaluate the actual stripping depth, along with any soft soils that require undercutting at the time of construction.

Any fill and backfill placed on the site should consist of approved materials that are free of organic matter and debris. Structural fill placed below the tower foundation should be limited to well graded crushed stone. Structural fill placed in other areas may also consist of low-plasticity cohesive soil. Low-plasticity cohesive soil should have a liquid limit of less than 45 percent and a plasticity index of less than 25 percent. The on site soils are considered suitable for re-use as fill outside the limits of the proposed tower foundations. Fill should not contain frozen material and it should not be placed on a frozen subgrade.

The fill should be placed and compacted in lifts of 9 inches or less in loose thickness. Fill placed below structures or used to provide lateral resistance should be compacted to at least 98 percent of the material's maximum standard Proctor dry density (ASTM D-698). Fill should be placed, compacted, and maintained at moisture contents within minus 1 to plus 3 percent of the optimum value determined by the standard Proctor test.

The geotechnical engineer should be retained to monitor fill placement on the project and to perform field density tests as each lift of fill is placed in order to evaluate compliance with the design requirements. Standard Proctor and Atterberg limits tests should be performed on the representative samples of fill materials before their use on the site.

#### Terracon

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#### 6.0 GENERAL COMMENTS

Terracon should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon also should be retained to provide testing and observation during excavation, grading, foundation and construction phases of the project.

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur across the site, between borings or due to the modifying effects of weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

APPENDIX



$\bigcap$	LOG OF BOF	RING	NC	). E	3-1					Pa	age 1 of 1
CLI	ENT General Dynamics										
SIT	E	PRO	JEC	Г		- 4	<b>C</b>			Touror	
	Hector, Kentucky				SAN	MPLES		lunica	ation	TESTS	i
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	NUMBER	ТҮРЕ	RECOVERY, in.	SPT - N * BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf	
	LEAN CLAY, with trace organics,	_									
	yellowish gray, very sun, (weathered shale)		CL	1	SS	18	14	20			
	<u>COAL</u> , black, very soft										
				2	SS	18	32				
		5									
	SEVERELY WEATHERED SHALE, light			3	SS	10	50/5				
	gray, soft										
	AUGER REFUSAL AT 10 FEET, BEGAN			4	SS	0	50/5				
	10 CORING	10		5		86%	ROD				
	25 BORING TERMINATED AT 25 FEET			6	DB	85%	0% RQD 48%				
The betv	stratification lines represent the approximate boundary lines veen soil and rock types: in situ, the transition may be gradual.									*MANU	JAL HAMMER
WA	TER LEVEL OBSERVATIONS, ft					BOR	ING ST	FARTE	Ð		8-17-05
WL			- 6	- 16 - 16		BOR	ING CO		ETED	000000	8-17-05
WL				] ل	∎∣						57055023

$\bigcap$	LOG OF BOF	RING	NC	). E	3-2					Pa	ige 1 of 1
CLI	ENT General Dynamics										
SIT	E	PRO	JECT	Г							
2 	Hector, Kentucky				He	ctor	Comm	unica	tion	TESTS	
RAPHIC LOG	DESCRIPTION	DEPTH, ft.	JSCS SYMBOL	NUMBER	LYPE	RECOVERY, in.	SPT - N * 3LOWS / ft.	NATER CONTENT, %	DRY UNIT WT	UNCONFINED STRENGTH, psf	
	<b>LEAN CLAY</b> , with trace coal, yellowish gray, very stiff		CL	1	SS	18	12	23			
	2.5 SEVERELY WEATHERED SHALE, gray, soft AUGER REFUSAL AT 6 FEET, BEGAN			2	SS	18	36				
	CORING 6 SHALE, moderately to severely	5		3	DB	70%	RQD				
	weathered, gray, very soft to soft			4	DB	100%	0% RQD 0%				
	21 BORING TERMINATED AT 21 FEET	20									
										*NAANI	
betw	stratification lines represent the approximate boundary lines veen soil and rock types: in-situ, the transition may be gradual.										
Ś WA						BOR	ING S		D		8-17-05
S WL			-6			BOK					0-17-05
			- 6	و ہے		APP	ROVE	) 2 2 2	J	OB #	57055023

$\square$	LOG OF BOR	RING	NC	). E	3-3					Pa	age 1 of 1
CLI	ENT Conoral Dynamics		<u></u>								
SITI		PRO	JEC	Γ		<u></u>					
	Hector, Kentucky		1		He	ctor	Comm	nunica	tion	Tower	6
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N * BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf	
	LEAN CLAY, orangish brown, very stiff										
			CL	1	SS	18	14	22			
	2.5 WEATHERED SHALE, grav, soft										
				2	SS	18	31				
	AUGER REFUSAL AT 7 FEET BEGAN										
	7 CORING			3	SS	0	50/5				
	<u>SHALE</u> , moderately to severely weathered, brown and gray to gray, soft to moderately hard	10-		5	DB	70%	RQD 0%				
	coal seam from 11 feet to 11.5 feet										
	22	20-		6	DB	100%	RQD 32%				
	BORING TERMINATED AT 22 FEET										
		25									
, The	stratification lines represent the approximate boundary lines									*MANL	JAL HAMMER
						BOR	ING ST	FARTE	D		8-17-05
					_ ł	BOR	ING CO	OMPLE	ETED		8-17-05
WL	<u>×</u> <u>×</u> lierr	aſ				RIG	(	CME-5	50 F	OREMA	N GT
WI					-	APP	ROVE	)	J	IOB #	57055023

# **GENERAL NOTES**

DRILLING &	& SAMPLING	SYMBOLS:
		-

SS:	Split Spoon - 1-°/8" I.D., 2" O.D., unless otherwise noted	HS:	Hollow Stem Auger
ST:	Thin-Walled Tube - 2" O.D., unless otherwise noted	PA:	Power Auger
RS:	Ring Sampler - 2.42" I.D., 3" O.D., unless otherwise noted	HA:	Hand Auger
DB:	Diamond Bit Coring - 4", N, B	RB:	Rock Bit
BS:	Bulk Sample or Auger Sample	WB:	Wash Boring or Mud Rotary

The number of blows required to advance a standard 2-inch O.D. split-spoon sampler (SS) the last 12 inches of the total 18-inch penetration with a 140-pound hammer falling 30 inches is considered the "Standard Penetration" or "N-value".

#### WATER LEVEL MEASUREMENT SYMBOLS:

WL:	Water Level	WS:	While Sampling	N/E:	Not Encountered
WCI:	Wet Cave in	WD:	While Drilling		
DCI:	Dry Cave in	BCR:	Before Casing Removal		
AB:	After Boring	ACR:	After Casing Removal		

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. Groundwater levels at other times and other locations across the site could vary. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels may not be possible with only short-term observations.

**DESCRIPTIVE SOIL CLASSIFICATION:** Soil classification is based on the Unified Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

CONSISTENCY OF FINE-GRAINED SOILS			RELATIVE DENSITY	RELATIVE DENSITY OF COARSE-GRAINED SOILS		
<u>Unconfined</u> <u>Compressive</u> <u>Strength, Qu, psf</u> < 500 500 - 1,000 1,001 - 2,000 2,001 - 4,000 4,001 - 8,000 8,000+	Standard Penetration or N-value (SS) Blows/Ft. <2 2-3 4-6 7-12 13-26 26+	Consistency Very Soft Soft Medium Stiff Stiff Very Stiff Hard	<u>Standard Penetratio</u> or N-value (SS) <u>Blows/Ft.</u> 0 - 3 4 - 9 10 - 29 30 - 49 50+	n <u>Relative Density</u> Very Loose Loose Medium Dense Dense Very Dense		
RELATIVE PROPORTIONS OF SAND AND GRAVEL			GRAIN SIZE TERMINOLOGY			
<u>Descriptive Term(s) of other</u> <u>constituents</u>		Percent of Dry Weight	<u>Major Component</u> <u>of Sample</u>	Particle Size		
Trace With Modifier		< 15 15 – 29 > 30	Boulders Cobbles Gravel	Over 12 in. (300mm) 12 in. to 3 in. (300mm to 75 mm) 3 in. to #4 sieve (75mm to 4.75 mm		
RELATIVE PROPORTIONS OF FINES			Sand Silt or Clay	#4 to #200 sieve (4.75mm to 0.075mm) Passing #200 Sieve (0.075mm)		
<u>Descriptive Term(s) of other</u> <u>constituents</u>		Percent of Dry Weight	<u>PLASTIC</u> <u>Term</u>	CITY DESCRIPTION Plasticity Index		
Trace With Modifiers		< 5 5 – 12 > 12	Non-plasti Low Medium High	c 0 1-10 11-30 30+		

#### **GENERAL NOTES** Description of Rock Properties

#### WEATHERING Fresh Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer if crystalline. Rock generally fresh, joints stained, some joints may show thin clay coatings, crystals in broken face show Very slight bright. Rock rings under hammer if crystalline. Rock generally fresh, joints stained, and discoloration extends into rock up to 1 in. Joints may contain clay. Slight In granitoid rocks some occasional feldspar crystals are dull and discolored. Crystalline rocks ring under hammer. Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are Moderate dull and discolored; some show clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock. All rock except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and majority Moderately severe show kaolinization. Rock shows severe loss of strength and can be excavated with geologist's pick. All rock except quartz discolored or stained. Rock "fabric" clear and evident, but reduced in strength to Severe strong soil. In granitoid rocks, all feldspars kaolinized to some extent. Some fragments of strong rock usually left. All rock except quartz discolored or stained. Rock "fabric" discernible, but mass effectively reduced to "soil" Very severe with only fragments of strong rock remaining. Rock reduced to "soil". Rock "fabric" not discernible or discernible only in small, scattered locations. Quartz Complete may be present as dikes or stringers. HARDNESS (for engineering description of rock - not to be confused with Moh's scale for minerals) Cannot be scratched with knife or sharp pick. Breaking of hand specimens requires several hard blows of Very hard geologist's pick. Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand Hard specimen. Can be scratched with knife or pick. Gouges or grooves to ¼ in. deep can be excavated by hard blow of Moderately hard point of a geologist's pick. Hand specimens can be detached by moderate blow. Can be grooved or gouged 1/16 in. deep by firm pressure on knife or pick point. Can be excavated in small Medium chips to pieces about 1 in. maximum size by hard blows of the point of a geologist's pick. Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several Soft inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure. Can be carved with knife. Can be excavated readily with point of pick. Pieces 1-in. or more in thickness can Very soft be broken with finger pressure. Can be scratched readily by fingernail. Joint, Bedding and Foliation Spacing in Rock<sup>a</sup> Joints Bedding/Foliation Spacing Less than 2 in. Very close Very thin 2 in. – 1 ft. Close Thin 1 ft. – 3 ft. Moderately close Medium Thick 3 ft \_\_\_ 10 ft Wide

More than 10 ft.	Vide Very v	vide	Very thick	
Rock Quality Designator (RQD) <sup>b</sup>		Joint Openness Descriptors		
RQD, as a percentage	Diagnostic description	Openness	Descriptor	
Exceeding 90 90 – 75 75 – 50	Excellent Good Fair	No Visible Separation Less than 1/32 in. 1/32 to 1/8 in.	Tight Slightly Open Moderately Open	
50 – 25 Less than 25	Poor Very poor	1/8 to 3/8 in. 3/8 in. to 0.1 ft. Greater than 0.1 ft	Open Moderately Wide Wide	

a. Spacing refers to the distance normal to the planes, of the described feature, which are parallel to each other or nearly so.

b. RQD (given as a percentage) = length of c ore in pieces 4 in. and longer/length of run.

References: American Society of Civil Engineers. Manuals and Reports on Engineering Practice - No. 56. <u>Subsurface Investigation for Design</u> and <u>Construction of Foundations of Buildings</u>. New York: American Society of Civil Engineers, 1976. U.S. Department of the Interior, Bureau of Reclamation, <u>Engineering Geology Field Manual</u>.



	UNIFIED	SOIL CLASS	IFICATION SYSTEM			
Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>					Soil Classification	
				Group Symbol	Group Name <sup>8</sup>	
Coarse Grained Soils	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines <sup>c</sup>	$Cu \ge 4$ and $1 \le Cc \le 3^{E}$	GW	Well-graded gravel <sup>F</sup>	
More than 50% retained			Cu < 4 and/or 1 > Cc > 3 <sup>E</sup>	GP	Poorly graded gravel <sup>F</sup>	
on No. 200 sieve		Gravels with Fines	Fines classify as ML or MH GM Silty grave	Silty gravel <sup>F.G. H</sup>		
		More than 12% fines <sup>c</sup>	Fines classify as CL or CH	GC	Clayey gravel <sup>F.G.H</sup>	
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands e Less than 5% fines <sup>D</sup>	$Cu \ge 6$ and $1 \le Cc \le 3^{E}$	SW	Well-graded sand <sup>1</sup>	
			Cu < 6 and/or 1 > Cc > 3 <sup>E</sup>	SP	Poorly graded sand	
		Sands with Fines More than 12% fines <sup>D</sup>	Fines classify as ML or MH	SM	Silty sand <sup>G.H.I</sup>	
			Fines Classify as CL or CH	SC	Clayey sand <sup>G,H,I</sup>	
Fine-Grained Soils	Silts and Clays	inorganic	PI > 7 and plots on or above "A" line <sup>3</sup>	CL	Lean clay <sup>KLM</sup>	
50% or more passes the No 200 sieve	Liquid limit less than 50		PI < 4 or plots below "A" line <sup>3</sup>	ML	Silt <sup>KLM</sup>	
		organic	Liquid limit - oven dried < 0.75	OL	Organic clay <sup>KLMN</sup>	
			Liquid limit - not dried		Organic silt <sup>K.L.M.O</sup>	
	Silts and Clays	inorganic	PI plots on or above "A" line	СН	Fat clay <sup>K,L,M</sup>	
	Liquid limit 50 or more		PI plots below "A" line	MH	Elastic Silt <sup>K-LM</sup>	
		organic	Liquid limit - oven dried < 0.75	ОН	Organic clay <sup>KLMP</sup>	
			Liquid limit - not dried		Organic silt <sup>KLMQ</sup>	
Highly organic soils Primarily organic matter, dark in color, and organic odor				PT	Peat	

<sup>A</sup> Based on the material passing the 3-in. (75-mm) sieve

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>c</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM wellgraded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM wellgraded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

<sup>E</sup> Cu = 
$$D_{60}/D_{10}$$
 Cc =  $\frac{(D_{30})^2}{D_{10} \times D_{60}}$ 

<sup>F</sup> If soil contains  $\geq$  15% sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup>If fines are organic, add "with organic fines" to group name.

<sup>1</sup> If soil contains  $\geq$  15% gravel, add "with gravel" to group name.

- <sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
   <sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
- <sup>L</sup> If soil contains  $\geq$  30% plus No. 200 predominantly sand, add
- "sandy" to group name.
- <sup>M</sup> If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.
- <sup>N</sup>  $Pl \ge 4$  and plots on or above "A" line.
- <sup>o</sup> PI < 4 or plots below "A" line.
- P PI plots on or above "A" line.
- <sup>Q</sup> PI plots below "A" line.



# Terracon

Exhibit F



في التحقيق التحق التحقيق التحق التحقيق ال التحقيق التحق التحقيق التحقيق التحقيق التحقيق التحق التحقيق التحقيق التحقيق التحقيق التحقيق التحقيق التحقيق التحقيق التحقيق ال التحقيق الحقيق التحقيق التحقيق التحق التحقيق التحقيق التحقيق التحقيق التحقيق التحقيق التحقيق التحقيق التحقيق التحقق التحقيق التحقيق التحق الت

# Competing Utilities, Corporations or Persons

American Tower

**Crown Communication** 

SBA Towers

Verizon

Sprint / Nextel

T-Mobile

Bluegrass Cellular

Exhibit G

Please Type or Print on This Form		Form Approved OMB No.2120-0001 Expretion Dete: 7/31/07
Failure To Provide All Requested Information U.S. Department of Transportation Federal AulsBon Administration	n May Delay Processing of Your Notice truction or Alteration	FOR FAA USE ONLY Astronation Starty Member
Spensor (person, company, elc. proposing this action):         Nth. of:       LISP         GLASS         Iame:       ATET         MTET       MIRELESS         Nddress:       5310         MRSLAND       WIAY         State:       TN         Sily:       BRENTWOOD         State:       TN         Sponsor's Representative (if other than #1):         Ntn. of:       WITH         JACODS         tame:       N 50R0         Notice of:       2000         ReeD       LANC         State:       KY         State:       KY         Marking/Painting and/or Lighting Preferred:       Building Intensity White	9. Latitude: $37 \circ 09$ 10. Longitude: $83 \circ 41$ 11. Datum: $\square$ NAD 83 $\square$ NAD 27 12. Nearest: City: $0NCIDA$ 13. Nearest Public-use (not private-use) of CONDON - CORDIN HIR POR 14. Distance from #13. to Structure: 15. Direction from #13. to Structure: 16. Site Elevation (AMSL): 17. Total Structure Height (AGL): 18. Overall Height (#16 + #17) (AMSL): 19. Previous FAA Aeronautical Study N/A 20. Description of Location: (Attach a L the precise site marked and any certified surve DRAWING	DI 06 " <u>03</u> 07 " Dother State KY. State State Stat
Red Lights and Paint Dual - Red and Medium Intensity White     White - Medium Intensity     Dual - Red and high Intensity Dual - Red and high Intensity White     Other      FCC Antenna Structure Registration Number (if applicable):  21. Complete Description of Proposal:		Frequency/Power (kW)
Notice is required by 14 Code of Federal Regulations, part 77 purposed to	4911S.C. Section 44718 Persons who knowing	And willingly violate the notice
Notice is required by 14 Code of Federal Regulations, part 77 pursuant to requirements of part 77 are subject to a civil penalty of \$1,000 per I hereby certify that all of the above statements made by me are true, complete, structure in accordance with established marking & lighting standards as neces	49 U.S.C., Section 44718. Persons who knowing day until the notice is received, pursuant to 49 U. and correct to the best of my knowledge. In a sary.	ly and willingly violate the notice S.C., Section 46301(a) ddition, 1 agree to mark and/or light the
Date Typed or Printed Name and Title of Person Fills	ng Notice Sig	mature
AA Form 7460-1 (2-99) Supersedes Previous Edition Electro	nic Version (Adabe)	NSN: 0052-00-012-00



KENTUCKY AIRPORT ZONING COMMISSION

Steven Beshear Governor

90 Airport Road, Bldg 400 Frankfort, KY 40601 502-564-4480

#### CONDITIONAL APPROVAL

November 18, 2008

A T & T MOBILITY AT&T Mobility 601 WEST CHESTNUT STREET BRENTWOOD, TN 37027

SUBJECT: AS-026-LOZ-2008-186 Hector site

Antenna Tower Oneida, KY STRUCTURE: LOCATION COORDINATES: 37° 9' 1.06" N / 83° 41' 3 67" W HEIGHT 310' AGL/1898'AMSL

Your application for a permit to construct or alter the above structure was reviewed at the Thursday, November 13, 2008 regular meeting of the Kentucky Airport Zoning Commission. This letter is to advise you that your permit has been tentatively approved by the Commission pending the FAA Determination. Upon receipt of notification of No Hazard, No IFR/VFR Effects from the FAA and FAA recommended lighting, final approval of your application will be granted and copies forwarded to you.

If you have any questions or would like to check on the status of your permit, please feel free to call me.

John Houlihan

Administrator

An Equal Opportunity Employer MED

Exhibit H

# ULS License

# Cellular License - KNKN673 - NEW CINGULAR WIRELESS PCS, LLC

Call Sign	KNKN673		Radio Service	CL - Cellular	
Status	Active		Auth Type	Regular	
Market					
Market	CMA453 - Kentucky 11	- Clay	Channel Block	A	
Submarket	0		Phase	2	
Dates					
Grant	08/21/2001		Expiration	10/01/2011	
Effective	02/08/2007		Cancellation		
Five Year Buildo	ut Date				
11/29/1996					
<b>Control Points</b>					
1	1650 LYNDON FARMS CO P: (502)329-4700	OURT, LOUIS	VILLE, KY		
Licensee					
FRN	0003291192		Туре	Limited Liability Company	
Licensee					
NEW CINGULAR WIRELESS PCS, LLC 5601 LEGACY DRIVE, MS: A-3 PLANO, TX 75024 ATTN KELLYE E. ABERNATHY			P:(469)229-7422 F:(469)229-7297 E:KELLYE.E.ABERNATHY@CINGULAR.COM		
Contact					
AT&T MOBILITY LLC DAVID C JATLOW 11760 US HIGHWAY 1 NORTH PALM BEACH, FL 33408			P:(202)255-1679 F:(561)279-2097 E:DAVID.JATLOW@CINGULAR.COM		
Ownership and	Qualifications				
Radio Service Typ	e Mobile				
Regulatory Status	Common Carrier	Interconne	ected Yes		
Alien Ownership The Applicant answered "No" to each of the Alien Ownership questions.					
<b>Basic Qualifications</b> The Applicant answered "No" to each of the Basic Qualification questions.					
Democranhice					
Race					
Ethnicity			Gender		
Linnercy			UCHUCI		

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Site Name: Hector Market: KY RSA 11

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AT&T Licensee Name: New Cingular Wireless PCS, LLC. License Call Sign: KNKN673

Exhibit I



Directions to Site: From Manchester, take U.S. Highway 421 South for approximately 4.25 miles to State Route 149 (Lockards Creek Road) and turn left. Go East on State Route 149 for approximately 3.7 miles to Bear Creek Road. Turn left onto Bear Creek Road for approximately 1.6 miles to Sizemore Cemetery Road and turn right. Follow Sizemore Cemetery Road approximately for 0.4 miles, access road to site is on the left.

Prepared by: Briggs Law Office, PSC (502) 254-9756

Market: <u>KSA</u> Cell Site Number: <u>10066062</u> Cell Site Name: <u>Hector</u> Fixed Asset Number: 10066062

#### **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 Hiram Henson and Rebecca Henson, a husband and wife,, having a mailing address of PO Box 35, Garrard, KY 40962 (hereinafter referred to as "Landlord") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 5405 Windward Parkway, Alpharetta, GA 30004 (hereinafter referred to as "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 339 Cemetery Road, Oneidea, in the County of Clay, 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. OPTION TO LEASE.

(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 room/cabinet/ground space as described on attached **Exhibit 1**, together with unrestricted access for Tenant's uses from the nearest public right-of-way along the Property to the Premises as described on the attached **Exhibit 1** (collectively, the "**Premises**").

(b) During the Option period and any extension thereof, and during the term of this Agreement, Tenant and its agents, engineers, surveyors and other representatives will have the right to enter upon the Property to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geological or engineering tests or studies of the Property (collectively, the "Tests"), to apply for and obtain licenses, permits, approvals, or other relief required of or deemed necessary or appropriate at Tenant's sole discretion for its use of the Premises and include, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits, and construction permits (collectively, the "Government Approvals"), initiate the ordering and/or scheduling of necessary utilities, and otherwise to do those things on or off the Property that, in the opinion of Tenant, are necessary in Tenant's sole discretion to determine the physical condition of the Property, the environmental history of the Property, Landlord's title to the Property and the feasibility or suitability of the Property for Tenant's Permitted Use, all at Tenant's expense. Tenant will not be liable to Landlord or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term (as defined below), 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 the sum

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(d) The Option may be sold, assigned or transferred at any time by Tenant to Tenant's parent company or member if Tenant is a limited liability company or any affiliate or subsidiary of, or partner in, Tenant or its parent company or member, 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 Initial Option Term and any extension thereof, Tenant may exercise the Option by notifying Landlord in writing. If Tenant exercises the Option then Landlord leases the Premises to the 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 Initial Option Term or any extension thereof, 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," which includes (without limitation) the remainder of the structure) 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 Initial Option Term or any extension thereof, 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 uses intended by Tenant as hereinafter set forth in this Agreement.

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 main entry point to the equipment shelter or cabinet, and to make Property improvements, alterations, upgrades or additions 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 Premises") for such modification or upgrade, Landlord agrees to lease to Tenant the Additional Premises, upon the same terms and conditions set forth herein, except that the Rent shall increase, in conjunction with the lease of the Additional Premises by a reasonable amount consistent with rental rates then charged for comparable portions of real property being in the same area. 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. <u>TERM.</u>

(a) The initial lease term will be five (5) years ("**Initial Term**"), commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of the Option (the "**Term Commencement Date**"). The Initial Term will terminate on the fifth (5<sup>th</sup>) annual 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 the "Extension Term"), upon the same terms and conditions unless the Tenant notifies the 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 fourth  $(4^{tb})$  extended 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 fourth  $(4^{tb})$  extended term, then upon the expiration of the fourth  $(4^{tb})$  extended term this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of one (1) year, and for annual terms thereafter 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 annual term. Monthly rental during such annual terms shall be equal to the rent paid for the last month of the fourth  $(4^{tb})$  extended 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, the Extension Term and the Holdover Term are collectively referred to as the Term ("Term").

#### 4. <u>RENT.</u>

(a) Commencing on the first day of the month following the date that Tenant commences construction (the "Rent Commencement Date"), Tenant will pay the Landlord a monthly rental payment of

calendar month in advance. In partial months occurring after the Rent Commencement Date, Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within thirty (30) days after the Rent Commencement Date.

(b) In year one (1) of each Extension Term, the monthly Rent will increase by %) over the Rent paid during the previous Term.

(c) All charges payable under this Agreement such as utilities and taxes shall be billed by Landlord within one (1) year from the end of the calendar year in which the charges were incurred; any charges beyond such period shall not be billed by Landlord, and shall not be payable by Tenant. The foregoing shall not apply to monthly rent which is due and payable without a requirement that it be billed by Landlord. The provisions of the foregoing sentence 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 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 Government 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 Tenant's choice. In the event Tenant determines, in its sole discretion, due to the title report results or survey results, that the condition

of the Premises is unsatisfactory, Tenant will have the right to terminate this Agreement upon notice to Landlord.

(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 the Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals.

6. **<u>TERMINATION</u>**. 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 Paragraph 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 obtaining or retaining the same is commercially unreasonable;

(c) by Tenant upon written notice to Landlord for any reason or no reason, at any time prior to commencement of construction by Tenant; or

(d) by Tenant upon sixty (60) days prior written notice to Landlord for any reason, so long as Tenant pays Landlord a termination fee equal to three (3) months Rent, at the then current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any one or more of Paragraphs 5(b), 6(a), 6(b), 6(c), 8, 11(d), 18, 19 or 23(j) of this Agreement.

#### 7. INSURANCE.

Tenant will carry during the Term, at its own cost and expense, the following insurance: (i) "All Risk" property insurance for its property's replacement cost; (ii) commercial general liability insurance with a minimum limit of liability of Two Million Five Hundred Thousand Dollars \$2,500,000 combined single limit for bodily injury or death/property damage arising out of any one occurrence; and (iii) Workers' Compensation Insurance as required by law. The coverage afforded by Tenant's commercial general liability insurance shall apply to Landlord as an additional insured, but only with respect to Landlord's liability arising out of its interest in the Property.

#### 8. <u>INTERFERENCE.</u>

(a) Where there are existing radio frequency user(s) on the Property, the Landlord will provide Tenant 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 the existing radio frequency user(s) operate and continue to operate within their respective frequencies and in accordance with all applicable laws and regulations.

(b) Landlord will not grant, after the date of this Agreement, a lease, license or any other right to any third party for the use of the Property, if such use may in any way adversely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.

(c) Landlord will not use, nor will Landlord permit its employees, tenants, licensees, invitees or agents to use, any portion of the Property in any way which interferes 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 then the parties acknowledge that Tenant will suffer irreparable injury, and therefore, Tenant will have the right, in addition to any other rights that it may have at law or in equity, for Landlord's breach of this Agreement, to elect to enjoin such interference or to terminate this Agreement upon notice to Landlord.
#### 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 attorneys' fees and court costs) arising directly from the installation, use, maintenance, repair or removal of the Communication Facility or Tenant's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Landlord, its employees, 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 attorneys' fees and court costs) arising directly from the actions or failure to act of Landlord or 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.

(c) 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.

#### 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 and bind itself hereto through the party set forth as signatory for the party below.

(b) Landlord represents and warrants 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 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 the Landlord; and (v) if the Property is or becomes encumbered by a deed to secure a debt, mortgage or other security interest, Landlord will provide promptly to Tenant a mutually agreeable Subordination, Non-Disturbance and Attornment Agreement.

#### 11. ENVIRONMENTAL.

(a) Landlord represents and warrants that the Property is free of hazardous substances as of the date of this Agreement, and, to the best of Landlord's knowledge, 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 environmental and industrial hygiene laws, including any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene condition or other matters as may now or at any time hereafter be in effect, that are now or were related to that party's activity conducted in or on the Property.

(b) Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of the indemnifying party for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding which is related to (i) the indemnifying party's failure to comply with any environmental or industrial hygiene law, including without limitation any regulations, guidelines, standards or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene conditions that arise out of or are in any way related to the condition of the Property and activities conducted by the party thereon, unless the environmental conditions are caused by the other party.

(c) The indemnifications of this Paragraph 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 Paragraph 11 will survive the expiration or termination of this Agreement.

(d) In the event Tenant becomes aware of any hazardous materials on the Property, or any environmental or industrial hygiene 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 government action, intervention or third-party liability, Tenant will have the right, in addition to any other rights it may have at law or in equity, to terminate the Agreement upon notice to Landlord.

ACCESS. At all times throughout the Term of this Agreement, and at no additional charge to Tenant, 12. Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular 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. 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 Paragraph 12, such failure shall be a default under this Lease. In connection with such default, in addition to any other rights or remedies available to Tenant under this Lease 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, including, but not limited to, its lost profits, 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 herein are a reasonable approximation of such damages. Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. In the event any public utility is unable to use the access or easement provided to Tenant then the Landlord agrees to grant additional access or an easement either to Tenant or to the public utility, for the benefit of Tenant, at no cost to Tenant.

13. <u>REMOVAL/RESTORATION.</u> 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 the 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 the 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 the 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 structual 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, in good and tenantable condition, subject to reasonable wear and tear and damage from the elements.

(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 the 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 thirty days of receipt of the usage data and required forms. Failure by Landlord to perform this function will limit utility fee recovery by Landlord to a 12-month period. If Tenant submeters electricity from Landlord, Landlord agrees to give Tenant at least 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) hour per day, seven (7) day per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, the Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption. Landlord will fully cooperate with any utility company requesting an easement over, under and across the Property in order for the utility company to provide service to the Tenant. 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.

#### 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 cure the default within such period and provided such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Landlord. If Landlord remains in default beyond any applicable cure period, Tenant will have the right to exercise any and all rights available to it under law and equity, including the right to cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant.

16. <u>ASSIGNMENT/SUBLEASE</u>. 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.

17. <u>NOTICES.</u> 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:

If to Tenant:

New Cingular Wireless PCS, LLC Attn: AT&T Network Real Estate Administration Re: Cell Site #: 10066062; Cell Site Name: Hector Fixed Asset No: 10066062 PO Box 1630 Alpharetta, GA 30009

(For Overnight Mail)

New Cingular Wireless PCS, LLC Attn: AT&T Network Real Estate Administration Re: Cell Site #: 10066062; Cell Site Name: Hector Fixed Asset No: 10066062 12555 Cingular Way Alpharetta, GA 30004

With a copy to: New Cingular Wireless PCS, LLC Attn: Legal Department Re: Cell Site #: 10066062; Cell Site Name: Hector Fixed Asset No: 10066062 5565 Glenridge Connector Suite 1700 Atlanta, GA 30342

#### If to Landlord: Hiram and Rebecca Henson PO Box 35 Garrard, KY 40962

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 will send the below documents (in section 17(b)(i) to Tenant. In the event Tenant does not receive such appropriate documents, Tenant shall not be responsible for any failure to pay the current landlord (i)

- a. Old deed to Property
- New deed to Property b.
- Bill of Sale or Transfer c.
- Copy of current Tax Bill đ.
- New W-9 e.
- f. New Payment Direction Form
- Full contact information for new Landlord including all phone numbers g.

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, provided that any award to Tenant will not diminish Landlord's recovery. Tenant will be entitled to reimbursement for any prepaid Rent on a prorata basis.

CASUALTY. Landlord will provide notice to Tenant of any casualty affecting the Property within 19. forty-eight (48) hours of the casualty. If any part of the Communication Facility or Property is damaged by fire or other casualty so as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may

terminate this Agreement by providing written notice to the Landlord, which termination will be effective as of the date of such damage or destruction. 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. If notice of termination is given, or if Landlord or Tenant undertake to rebuild the Communications Facility, Landlord aggress to use its reasonable efforts to permit Tenant to place temporary transmission and reception facilities on the Property at no additional Rent until such time as Tenant is able to activate a replacement transmission facility at another location or the reconstruction of the Communication Facility is completed.

20. <u>WAIVER OF LANDLORD'S LIENS.</u> Landlord waives any and all lien rights it may have, statutory or otherwise, concerning the Communication Facility or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law, and 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, 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. 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 both, with respect to the valuation of the Premises. Landlord shall cooperate in the institution and prosecution of any such proceedings and will execute any documents required therefore. 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/RIGHT OF FIRST REFUSAL.

If Landlord, at any time during the Term of this Agreement, decides to sell, subdivide or rezone (a) any of the Premises, 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 sale, subdivision or rezoning shall be subject to this Agreement and Tenant's rights hereunder. 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. Landlord shall not be prohibited from the selling, leasing or use of any of the Property or the Surrounding Property for non-wireless communication use. 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 paper work to effect a transfer in Rent to the new landlord. The provisions of this Paragraph 22 shall in no way limit or impair the obligations of Landlord under Paragraph 8 above.

(b) If at any time after the Effective Date, Landlord receives a bona fide written offer from a third party seeking an assignment of the rental stream associated with this Agreement ("**Purchase Offer**"), Landlord shall immediately furnish Tenant with a copy of the Purchase Offer, together with a representation that the Purchase Offer is valid, genuine and true in all respects. Tenant shall have the right within thirty (30) days after it receives such copy and representation to match the Purchase Offer and agree in writing to match the terms of

the Purchase Offer. Such writing shall be in the form of a contract substantially similar to the Purchase Offer. If Tenant chooses not to exercise this right of first refusal or fails to provide written notice to Landlord within the thirty (30) day period, Landlord may assign the rental stream pursuant to the Purchase Offer, subject to the terms of this Agreement (including without limitation the terms of this Subparagraph 22(B), to the person or entity that made the Purchase Offer provided that (i) the assignment is on the same terms contained in the Purchase Offer and (ii) the assignment occurs within ninety (90) days of Tenant's receipt of a copy of the Purchase Offer. If such third party modifies the Purchase Offer or the assignment does not occur within such ninety (90) day period, Landlord shall re-offer to Tenant, pursuant to the procedure set forth in this subparagraph 22(b), the assignment on the terms set forth in the Purchase Offer, as amended. The right of first refusal hereunder shall (i) survive any transfer of all or any part of the Property or assignment of all or any part of the Agreement; (ii) bind and inure to the benefit of, Landlord and Tenant and their respective heirs, successors and assigns; (iii) run with the land; and (iv) terminate upon the expiration or earlier termination of this Agreement.

#### 23. <u>MISCELLANEOUS.</u>

(a) Amendment/Waiver. This Agreement cannot be amended, modified or revised unless done in writing and signed by an authorized agent of the Landlord and an authorized agent of the Tenant. No provision may be waived except in a writing signed by both parties.

(b) Memorandum/Short Form Lease. 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. Either party may record this Memorandum or Short Form of Lease at any time, in its absolute discretion.

(c) 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.

(d) Entire Agreement. This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and agreements with respect to the subject matter of this Agreement.

(e) 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.

(f) Interpretation. Unless otherwise specified, the following rules of construction and interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in the Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of the 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; and (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.

(g) **Estoppel.** Either party will, at any time upon twenty (20) business days prior written notice from the other, execute, acknowledge and deliver to the other a statement in writing (i) certifying that this Agreement is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying this Agreement, as so modified, is in full force and effect) and the date to which the Rent and other charges are paid in advance, if any, and (ii) acknowledging that there are not, to such party's knowledge, any uncured defaults on the part of the other party hereunder, or specifying such defaults if any are claimed. Any such statement may be conclusively relied upon by any prospective purchaser or encumbrance of the Premises. The requested party's failure to deliver such a statement within such time will be conclusively relied upon by the requesting party that (i) this Agreement is in full force and effect, without modification except as may be properly represented by the requesting party, (ii) there are no uncured defaults in either party's performance, and (iii) no more than one month's Rent has been paid in advance.

(h) 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.

(i) 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.

(j) Severability. If any term or condition of this Agreement is found unenforceable, the remaining terms and conditions will remain binding upon the parties as though said unenforceable provision were not contained herein. However, if the invalid, illegal or unenforceable provision materially affects this Agreement then the Agreement may be terminated by either party on ten (10) business days prior written notice to the other party hereto.

(k) **Counterparts.** This Agreement may be executed in two (2) or more counterparts, all of which shall be considered on and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties. It being understood that all parties need not sign the same counterpart.

#### [SIGNATURES APPEAR ON THE NEXT PAGE]

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

#### "LANDLORD"

#### "LANDLORD"

Rebecca Henson

Hiram Henson

By: Auram Hienson Print Name: Hiram Henson Its: Co-gwner Date: 5-33-68

-

By: Riebecca Henry Print Name: Rebecca Henson Its: Co-owner Date: 5-33-08

"TENANT"

New Cingular Wireless PCS, LLC By: AT&T Mobility Corporation Its: Manager

By: U Name: William Plantz xecutive Din Title: Network Oper Date:

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[ACKNOWLEDGMENTS APPEAR ON THE NEXT PAGE]

#### TENANT ACKNOWLEDGMENT

PANESSEE STATE OF ) ss: COUNTY OF Williamson and acknowledged, under oath that he is the <u>Executive Director Memory</u> and acknowledged, under oath that he is the <u>Executive Director Memory</u> lof <u>New Contractor Res. U.c.</u>, the <u>A</u> <u>Ordenset finited liverity</u> named in the attached instrument, and as such was anthonized to execute this instrument on behalf of the <u>Executive Director</u>. <u>NOTARY</u> <u>PUBLIC</u> .... Notary Public: ERICA L. CLANTON 1 COM My Commission Expires: MAY 8,2012 My Commission Expires MAY 8, 2012

FOR INDIVIDUAL:

STATE OF KENTUCKY COUNTY OF CLAY

On this  $23^{1/2}$  day of MAY, 2008, before me personally appeared  $K_{SVACA}$  to me known (or proved to me on the basis of satisfactory evidence) to be the person described in and who executed the foregoing instrument, and acknowledged that such person executed the same as such person's free act and deed.

Robert H CRAIMMER Name:

Notary Public

My Commission Expires: 1-15-2010

[NOTARIAL SEAL]

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BEGINNING at a corner in the Stanley Bowling line (now Madden-Roberts line) marked by a Black Walnut with two blazes and two paint rings and turning 90% and running toward and parallel with the existing cemetery line to a forked Sassafras marked with two blazes and two painted rings in the edge of the road and on with the cemetery line to a White Oak marked with two blazes and two painted rings and thence turning toward the cemetery and running to the cemetery line and back with the cemetery line to the edge of the road and thence to the Black Walnut.

To be all of the property he owns on the Bar Creek Road.

Grantors, their successors and assigns hereby waive any and all wheelage rights, royalties or fees should future development of this land require the Grantees, their heirs, successors or assigns, to transport minerals, lumber or other products of this property over land now owned by the Grantors. The road from Bar Creek Road onto the Hinkle tract was constructed by the County, has been in use for approximately 25 years and all of Grantors rights, privilege and uses of said road are conveyed herewith. This roadway was given by the Hinkle heirs across their property prior to said construction.

All tobacco base and rights are hereby transferred to Grantees.



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- This Exhibit may be replaced by a land survey and/or construction drawings of the Premises once received by Tenant.
  Any setback of the Premises from the Property's boundaries shall be the distance required by the applicable governmental authorities.
  Width of access road shall be the width required by the applicable governmental authorities, including police and fire departments.
  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



TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Notice of Proposed Construction Wireless Telecommunications Facility

Vernon Smith c/o Taylor Smith P.O. Box 25 Garrard, KY 40941

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 2008-00470 in any correspondence.

Sincerely,

lel & Sm

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

TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### **Notice of Proposed Construction** Wireless Telecommunications Facility

Jerry and Selenia Sizemore P.O. Box 28 Garrard, KY 40941

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 <u>2008-00470</u> in any correspondence.

Sincerely,

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

#### TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Notice of Proposed Construction Wireless Telecommunications Facility

Roger Bowling P.O. Box 287 Garrard, KY 40941

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 <u>2008-00470</u> in any correspondence.

Sincerely,

Jul & by

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

TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Notice of Proposed Construction Wireless Telecommunications Facility

Stephen Patton Danny Henson 239 Cedar Lane Blairville, GA 30512

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 <u>2008-00470</u> in any correspondence.

Sincerely,

Sall & By

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

#### TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Notice of Proposed Construction Wireless Telecommunications Facility

Donald D. & R.D. House 1985 Farris Jones Road East Bernstadt, KY 40729

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 <u>2008-00470</u> in any correspondence.

Sincerely,

John MAN

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

TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Notice of Proposed Construction Wireless Telecommunications Facility

William Hinkle Heirs 3431 Hwy 149 Manchester, KY 40962

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 <u>2008-00470</u> in any correspondence.

Sincerely,

Jul 1 By

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

TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Notice of Proposed Construction Wireless Telecommunications Facility

U.S. Forestry Service Star Route Box 1 Big Creek, KY 40914

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 2008-00470 in any correspondence.

Sincerely,

Mal KBy

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

TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Notice of Proposed Construction Wireless Telecommunications Facility

Bowling and Smith Cemetery Manchester, KY 40962

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 <u>2008-00470</u> in any correspondence.

Sincerely,

held K By

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

TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Notice of Proposed Construction Wireless Telecommunications Facility

Arthur and Sharlene Bowling 3326 Hwy 149 Manchester, KY 40962

#### 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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support tower, plus related ground facilities.

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

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 <u>2008-00470</u> in any correspondence.

Sincerely,

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

Exhibit K

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#### TODD R. BRIGGS 17300 POLO FIELDS LANE LOUISVILLE, KENTUCKY 40245

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

#### Via Certified Mail Return Receipt Requested

Honorable Carl Sizemore Clay County Judge Executive 102 Richmond Road Suite 201 Manchester, KY 40962

#### **RE:** Notice of Proposal to Construct Wireless Telecommunications Facility Kentucky Public Service Commission--Case No. 2008-00470

Dear Judge McCaslin:

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 339 Sizemore Cemetery Road, Oneida, Kentucky 40972. A map showing the location is attached. The proposed facility will include a 300 foot self-support 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 2008-00470 in any correspondence.

Sincerely,

Mallip

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

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:

or

Briggs Law Office, PSC 17300 Polo Fields Lane Louisville, KY 40245 (502) 254-9756 Executive Director Public Service Commission 211 Sower Boulevard PO. Box 615 Frankfort, KY 40602

Please refer to Commission's Case #2008-00470 in your correspondence.

## PUBLIC NOTICE

New Cingular Wireless PCS, LLC proposes to construct a telecommunications

# TOWER

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

Briggs Law Office, PSC 17300 Polo Fields Lane Or Louisville, KY 40245 (502) 254-9756 Executive Director Public Service Commission 211 Sower Boulevard P.O. Box 615 Frankfort, KY 40602

Please refer to Commission's **Case #2008-00470** in your correspondence.

Exhibit M



Hector Search Area

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### Exhibit N



AT&T Mobility 3231 N. Green River Rd. Evansville, IN 47715

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

November 13, 2008

To Whom It May Concern:

Dear Sir or Madam:

This letter is to state the need of the proposed AT&T site called Hector, to be located in Clay County, KY. The Hector site is necessary to improve coverage and eliminate interference in central Clay County. This site will improve the coverage and reduce interference on the Daniel Boone Pkwy, State Hwy 149, Bear Creek Road, and the surrounding area. Our closest existing site to this area is over 3.5 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. With the addition of this site, the customers in this area of Clay County will experience improved reliability, better in-building coverage, and improved access to emergency 911 services.

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Shu. A Le.

Sherri A Lewis RF Design Engineer



AT&T Mobility 3231 N. Green River Rd. Evansville, IN 47715

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

November 13, 2008

To Whom It May Concern:

Dear Sir or Madam:

This letter is to serve as documentation that the proposed AT&T site called Hector, to be located in Clay County, KY at Latitude 37-09-01.06 North, Longitude 083-41-03.67 West, has been designed, and will be built and operated in accordance with all applicable FCC and FAA regulations.

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Sherri A Lewis RF Design Engineer