### BRIGGS LAW OFFICE, PSC

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

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

August 19, 2009

## RECEIVED

Via Fedex Overnight Delivery

AUG 21 2009

PUBLIC SERVICE COMMISSION

Kentucky Public Service Commission Attn: Ryan Gatewood Director, Division of Filings 211 Sower Boulevard Frankfort, KY 40602

### **Application to Construct Wireless Communications Facility** RE: Case Number: 2009-00319

Dear Mr. Gatewood,

On behalf of my client, New Cingular Wireless PCS, LLC, we are hereby submitting an original and five (5) copies of an Application for Certificate of Public Convenience and Necessity to Construct a Wireless Communications Facility in an area entirely within Graves County, Kentucky which is outside the jurisdiction of a Planning Commission.

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

Sincerely,

Ul KBY

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

Enclosures

### COMMONWEALTH OF KENTUCKY BEFORE THE 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 NEAR )C INTERSECTION OF STATE ROUTE 58 AND U.S. 45 ) MAYFIELD, GRAVES COUNTY, KENTUCKY, 42066 ) IN THE WIRELESS COMMUNICATIONS LICENSE AREA ) IN THE COMMONWEALTH OF KENTUCKY )

)CASE: 2009-00319

## RECEIVED

AUG 21 2009

SITE NAME: PRYORSBURG (339G0157)

PUBLIC SERVICE COMMISSION

### 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 Graves 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 near the intersection of State Route 58 and U.S. 45, Mayfield, Kentucky 42066 (36° 40' 56.30" North Latitude, 88° 44' 18.57" West Longitude (NAD 83)), in an area entirely within Graves County. The property in which the WCF will be located is currently owned by Harold E. and Belinda J. Green as to ½ interest and Scott D. Green as ½ interest, pursuant to that Deed of record in Deed Book 413, Page 666 in the Office of the Graves County Clerk. The proposed WCF will consist of a 250 foot self-support tower with an approximately 10-foot tall lightning arrestor attached to the top of the tower for a total height of 260 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**.

6. A detailed description of the manner in which the WCF will be constructed is included in the site plan and a vertical tower profile signed and sealed by a professional engineer registered in Kentucky is attached as **Exhibit C**. Foundation design plans and a description of the standards according to which the tower was designed which have been signed and sealed by a professional engineer registered in Kentucky are attached as **Exhibit D**.

7. A geotechnical engineering report was performed at the WCF site by Patriot Engineering and Environmental, Inc. of Louisville, Kentucky, dated July 1, 2009 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 Determination of No Hazard to Air Navigation is attached as **Exhibit G**. The Kentucky Airport Zoning Commission Approval of Application dated August 13, 2009 is also attached as **Exhibit G**.

10. The Applicant operates on frequencies licensed by the Federal Communications Commission pursuant to applicable federal requirements.

3

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. 2102820005A dated December 1, 1992 indicates that the proposed WCF is not located within any flood hazard area.

12. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. Project Manager for the site is Chad Goughnour, of Nsoro, Inc.

13. Clear directions to the proposed WCF site from the county seat are attached as **Exhibit I**, including the name and telephone number of the preparer. A copy of the lease for the property on which the tower is proposed to be located is also attached as **Exhibit I**.

14. Applicant has notified every person of the proposed construction who, according to the records of the Graves County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or is contiguous to the site property, 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 Graves County Judge Executive by certified mail, return receipt requested, of the proposed construction. The notice included the docket number under which the Application will be processed and

4

informed the Graves 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 (Mayfield Messenger).

17. The site of the proposed WCF is located in an undeveloped area near Mayfield, 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,

101 Todd R. Briggs

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 Foundation Design Report
Exhibit E	Geotechnical Engineering Report
Exhibit F	Competing Utilities List and Map of Like Facilities, General Area
Exhibit G	FAA Determination of No Hazard KAZC Approval
Exhibit H	FCC Documentation
Exhibit I	Directions to Site and Copy of Lease Agreement
Exhibit J	Property Owner Notification Listing Copy of Property Owner Notifications 500' Radius Vicinity Map
Exhibit K	Copy of County Judge Executive Notice
Exhibit L	Copy of Posted Notices
Exhibit M	Map of Search Area
Exhibit N	Miscellaneous

Exhibit A

## Commonwealth of Kentucky Trey Grayson, Secretary of State

7/22/2008

Division of Corporations Business Filings

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

Authentication Number: 67612 Jurisdiction: Kentucky Visit <u>http://apps.sos.ky.gov/business/obdb/certvalidate.aspx\_to</u> 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.



7-6-

Trey Grayson Secretary of State Commonwealth of Kentucky 67612/0481848

Delaware 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.

2445544 8100 040770586

Alarriet Smith Windson AUTHENTICATION: 3434823

name. 10 25.0x

### 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  $20^{14}$  day of October, 2004.

~~~<u>~</u>\_\_\_\_

AT&T WIRELESS PCS, LLC

By: Cingular Wireless LLC, its Manager

By: 1 aro Name: Joanne Todaro Title: Assistant Secretary

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ATL01/11728913y2

AT&T LEGAL

Ø 003

### 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 \_\_\_\_\_ day of September, 1999.

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

Mark U. Thomas, Vice President





NORTH IS BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTH ZONE AND WAS DETERMINED BY COMPLITATION FROM GPS OBSERVATION ON MAY 18 2009

| 40'                                                                                                                |                        | <i>80'</i>   |
|--------------------------------------------------------------------------------------------------------------------|------------------------|--------------|
| (IN FEET)<br>SCALE 1" = 40'                                                                                        |                        |              |
| ICATION TOWER                                                                                                      | SITE                   | SURVEY       |
|                                                                                                                    | DATE                   |              |
|                                                                                                                    | DATE                   |              |
| FLOOD INSURANCE RATE MAPS<br>12.01 92 AND THE PROPOSED<br>BE IN A FLOOD PRONE AREA.<br>F AREA IS LOCATED IN ZONE X | (FIRM) MA<br>LEASE ARL | IP NO.<br>54 |







NORTH IS BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTHERN ZONE AND WAS DETERMINED BY COMPUTATION FROM G.P.S. OBSERVATION ON MAY 18, 2009.

W/ LEASE AREA (WHERE REQUIRED) 2. FINISH GRADING TO PROVIDE EFFECTIVE DRAINAGE W/ A SLOPE OF NO LESS THAN ONE EIGHTH (1/8") PER FOOT FLOWING AWAY FROM EQUIP. FOR A MIN. DISTANCE OF SIX FEET (6') IN ALL DIRECTIONS. 3 LOCATE ALL U.G. UTILITIES PRIOR TO

|        | EXISTING CONTOURS                |
|--------|----------------------------------|
|        | PROPOSED CONTOURS                |
| -E     | OVERHEAD ELECTRIC                |
| G      | UNDERGROUND GAS LINE             |
| W      | UNDERGROUND WATER LINE           |
| s      | PROPOSED SILT FENCE LINE         |
| ĭ      | OVERHEAD TELEPHONE LINE          |
| D      | DRAINAGE/STORM SEWER LINE        |
| -X     | FENCE LINE                       |
|        | SUBJECT PROPERTY BOUNDARY        |
|        | RIGHT OF WAY CENTERLINE          |
| TIONS, | OR LINESTYLES DO NOT NECESSARILY |
| NG(S)  | USE ONLY AS APPLICABLE           |
|        |                                  |









6718 W Plank Road Peoria, IL 61604 USA Phone 309-697-4400 FAX 309-697-5612 Toll Free 800-727-ROHN

PURCHASER: AMERICAN TOWER CORPORATION

NAME OF PROJECT: PRYORSBURG, GRAVES COUNTY, KENTUCKY 250 FT. MODEL SSVMW TOWER

FILE NUMBER: 0606409

DRAWING NUMBER: A090561

I CERTIFY THAT THE ATTACHED DRAWING AND CALCULATIONS WERE

PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH THE

LOADING CRITERIA SPECIFIED BY THE PURCHASER AND THAT I AM A

REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

OF KENTUCKY

CERTIFIED BY: 1-6-09 DAVID G. DATE: BRINKEF 10 10 10 100 100 100 . 1952 - Landard - Landard







### File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower Date and Time: 4/30/2009 9:35:58 AM

### **DESIGN SPECIFICATION**

Design Standard: TIA/EIA-222-F-1996 Basic Wind speed = 80.0 (mph) ✓ Service Wind speed = 50.0 (mph) Ice thickness = 0.50 (in)

| Sct.                                                        | Length<br>(ft)                                                                                                    | Top Width<br>(in)                                                                                                 | Bot Width<br>(in)                                                                                                            |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12 | 20.00<br>20.00<br>20.00<br>20.00<br>20.00<br>20.00<br>20.00<br>20.00<br>20.00<br>20.00<br>20.00<br>20.00<br>20.00 | 302.17<br>275.98<br>252.01<br>227.99<br>203.90<br>179.06<br>155.04<br>129.96<br>105.94<br>81.97<br>57.13<br>55.79 | 332.17<br>300.00<br>275.98<br>252.01<br>227.99<br>203.90<br>179.06<br>179.06<br>179.06<br>129.96<br>105.94<br>81.97<br>57.13 |
| 13                                                          | 12.00                                                                                                             | 55.79                                                                                                             | 55.79                                                                                                                        |

| MAXIMUM BASE REACTIONS |       |       |  |  |  |  |
|------------------------|-------|-------|--|--|--|--|
|                        | Iced  |       |  |  |  |  |
| Download (Kips)        | 396.2 | 381.7 |  |  |  |  |
| Uplift (Kips)          | 341.7 | 302.7 |  |  |  |  |

38.2

36.3

Shear (Kips)

Licensed to: ROHN Products LLC Peoria, Illinois

Revision: 0 Site: PRYORSBURG Engineer: AMKW/DWG

XX

12.00

20.00

20.00

20.00

20.00

20.00

20.00

20.00

20.00

20.00

20.00

20.00

20.00

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252.00



### File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower Date and Time: 4/30/2009 9:35:58 AM

### Section A: PROJECT DATA

| Project Title: | 250ft ROHN SSV Tower |
|----------------|----------------------|
| Customer Name: | American Tower Corp  |
| Site:          | PRYORSBURG           |
| Contract No.:  | 060-6409             |
| Revision:      | 0                    |
| Engineer:      | AMKW/DWG             |
| Date:          | Apr 30 2009          |
| Time:          | 09:35:16 AM          |

Design Standard: TIA/EIA-222-F-1996

### GENERAL DESIGN CONDITIONS

| <pre>Start Wind direction:<br/>End Wind direction:<br/>Increment wind direction:<br/>Elevation above ground:<br/>Gust Response Factor Gh:<br/>Material Density:<br/>Young's Modulus:<br/>Poisson Ratio:<br/>Weight Multiplier:<br/>Allowable Stress Incr. Factor:<br/>Increase allowable stress:</pre> | 0.00 (Deg)<br>330.00 (Deg)<br>0.00 (Deg)<br>0.00 (ft)<br>1.10<br>490.1 (lbs/ft <sup>3</sup> )<br>29000.0 (ksi)<br>0.3<br>1.00<br>1.333<br>Yes |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| WIND ONLY CONDITIONS:<br>Basic Wind Speed:                                                                                                                                                                                                                                                             | 80.00(mph) 1                                                                                                                                  |
| WIND AND ICE CONDITIONS:<br>Basic Wind Speed:<br>Ice Thickness:<br>Ice density:<br>Wind pressure reduction<br>for iced conditions:                                                                                                                                                                     | 80.00(mph)<br>0.50(in)<br>56.19(lbs/ft <sup>3</sup> )<br>0.75                                                                                 |

Analysis performed using: TowerSoft Finite Element Analysis Program

Licensed to: ROHN Products LLC Peoria, Illinois

.

Revision: 0 Site: PRYORSBURG Engineer: AMKW/DWG



File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower Date and Time: 4/30/2009 9:35:58 AM Licensed to: ROHN Products LLC Peoria, Illinois

Revision: 0 Site: PRYORSBURG Engineer: AMKW/DWG

### Section B: STRUCTURE GEOMETRY

TOWER GEOMETRY

| Cross-Section | Height<br>(ft) | Tot Height<br>(ft) | # of Section | Bot Width<br>(in) | Top Width<br>(in) |
|---------------|----------------|--------------------|--------------|-------------------|-------------------|
| Triangular    | 252.00         | 252.00             | 13           | 332.17            | 55.79             |

### SECTION GEOMETRY

| Sec  | Sec. 1  | Name           | Elevat | tion    | Widt    | ths   |        |        |        | Mass   | es     |       |        | Brcg.     |
|------|---------|----------------|--------|---------|---------|-------|--------|--------|--------|--------|--------|-------|--------|-----------|
|      |         |                | Bottom | Тор     | Bottor  | n Top | Legs   | Brcc   | g. Sec | .Brc I | nt.Brc | Sect. | Databa | se Clear. |
| #    |         |                | (ft)   | (ft)    | (in)    | (in)  | (lbs)  | (lbs   | s) (1  | os)    | (lbs)  | (lbs) | (lbs)  | (in)      |
| 13   | R-6N23  | 35*            | 240.00 | 252.00  | 56      | 56    | 208    | 233    | 0      | 0      |        | 441   | 551    | 0.787     |
| 12   | R-6N39  | <del>9</del> 0 | 220.00 | 240.00  | 57      | 56    | 455    | 593    | 0      | 0      |        | 1048  | 1312   | 0.787     |
| 11   | R-7N74  | 19             | 200.00 | 220.00  | 82      | 57    | 902    | 512    | 0      | 0      |        | 1414  | 1772   | 0.787     |
| 10   | R-8N23  | 36             | 180.00 | 200.00  | 106     | 82    | 1249   | 540    | 0      | 0      |        | 1789  | 2235   | 0.787     |
| 9    | R-9N41  | 14             | 160.00 | 180.00  | 130     | 106   | 1250   | 684    | 0      | 0      |        | 1934  | 2423   | 0.787     |
| 8    | R-10N3  | 301*           | 140.00 | 160.00  | 155     | 130   | 1371   | 751    | 0      | 0      |        | 2123  | 2659   | 0.787     |
| 7    | R-11N2  | 262*           | 120.00 | 140.00  | 179     | 155   | 1720   | 103    | 10     | 0      |        | 2751  | 3448   | 0.787     |
| 6    | R-12N   | 15*            | 100.00 | 120.00  | 204     | 179   | 1720   | 976    | 0      | 0      |        | 2696  | 3201   | 0.787     |
| 5    | R-13N3  | 102            | 80.00  | 100.00  | 228     | 204   | 1985   | 1318   | 9 O    | 0      |        | 3303  | 4006   | 0.787     |
| 4    | R-14N3  | 33             | 60.00  | 80.00   | 252     | 228   | 1985   | 1544   | 4 0    | 0      |        | 3529  | 4425   | 0.787     |
| 3    | R-15N   | 30             | 40.00  | 60.00   | 276     | 252   | 2610   | 1910   | 50     | 0      |        | 4525  | 4890   | 0.787     |
| 2    | R-16N   | 19             | 20.00  | 40.00   | 300     | 276   | 2610   | 2064   | 4 0    | 0      |        | 4674  | 5073   | 0.787     |
| 1    | R-MWK   | 34*            | 0.00   | 20.00   | 332     | 302   | 2613   | 1280   | 0 40   | 54     | 33     | 4732  | 5661   | 0.787     |
| Tota | l Mass  | :              |        |         |         |       | 20679  | 9 1344 | 41 40  | 6 4    | 33     | 34959 | 4165   | 5         |
| PANE | L GEOMI | ETRY           |        |         |         |       |        |        |        |        |        |       |        |           |
| Sec# | Pnl#    | Туре           | SecB:  | rcq Mid | . Horiz | Horiz | Height | Bottom | Top    | Plan   | Hi     | σ     | Gusset | Gusset    |
|      |         |                |        | Con     | tinuous |       | -      | Width  | Width  | Bracin | ig Br  | acing | Plate  | Plate     |
|      |         |                |        |         |         |       |        |        |        |        |        | -     | Area   | Weight    |
|      |         |                |        |         |         |       | (ft)   | (in)   | (in)   |        |        |       | (ft^2) | (1bs)     |
| 13   | 3       | X              | (Non   | e)      |         | None  | 4.0    | 55.8   | 55.8   | (None) | (N     | one)  | 0.604  | 0.00      |
| 13   | 2       | х              | (None  | е)      |         | None  | 4.0    | 55.8   | 55.8   | (None) | (N     | one)  | 0.604  | 0.00      |
| 13   | 1       | Х              | (None  | e)      |         | None  | 4.0    | 55.8   | 55.8   | (None) | (N     | one)  | 0.604  | 0.00      |
| 12   | 5       | х              | (None  | e)      |         | None  | 4.0    | 56.1   | 55.8   | (None) | (N     | one)  | 0.000  | 0.00      |
| 12   | 4       | х              | (Non   | e)      |         | None  | 4.0    | 56.3   | 56.1   | (None) | (N     | one)  | 0.000  | 0.00      |
| 12   | 3       | Х              | (None  | e)      |         | None  | 4.0    | 56.6   | 56.3   | (None) | (N     | one)  | 0.000  | 0.00      |
| 12   | 2       | х              | (None  | e)      |         | None  | 4.0    | 56.9   | 56.6   | (None) | (N     | one)  | 0.000  | 0.00      |
| 12   | 1       | х              | (Non   | e)      |         | None  | 4.0    | 57.1   | 56.9   | (None) | (N     | one)  | 0.000  | 0.00      |
| 11   | 5       | х              | (None  | e)      |         | None  | 4.0    | 62.1   | 57.1   | (None) | (N     | one)  | 0.604  | 0.00      |
| 11   | 4       | X              | (None  | e)      |         | None  | 4.0    | 67.1   | 62.1   | (None) | (N     | one)  | 0.604  | 0.00      |
| 11   | 3       | х              | (None  | e)      |         | None  | 4.0    | 72.0   | 67.1   | (None) | (N     | one)  | 0.604  | 0.00      |
| 11   | 2       | х              | (Non   | e)      |         | None  | 4.0    | 77.0   | 72.0   | (None) | (N     | one)  | 0.604  | 0.00      |
| 11   | 1       | х              | (None  | e)      |         | None  | 4.0    | 82.0   | 77.0   | (None) | (N     | one)  | 0.604  | 0.00      |
| 10   | 4       | х              | (None  | e)      |         | None  | 5.0    | 88.0   | 82.0   | (None) | (N     | one)  | 0.755  | 0.00      |
| 10   | 3       | х              | (Non-  | e)      |         | None  | 5.0    | 94.0   | 88.0   | (None) | (N     | one)  | 0.755  | 0.00      |
| 10   | 2       | х              | (None  | e)      |         | None  | 5.0    | 100.0  | 94.0   | (None) | (N     | one)  | 0.755  | 0.00      |
| 10   | 1       | х              | (Non-  | e)      |         | None  | 5.0    | 105.9  | 100.0  | (None) | (N     | one)  | 0.755  | 0.00      |
| 9    | 3       | X              | (Non   | e)      |         | None  | 6.7    | 114.0  | 105.9  | (None) | (N     | one)  | 1.006  | 0.00      |
| 9    | 2       | х              | (Non   | e)      |         | None  | 6.7    | 122.0  | 114.0  | (None) | (N     | one)  | 1.006  | 0.00      |
| 9    | 1       | х              | (Non-  | e)      |         | None  | 6.7    | 130.0  | 122.0  | (None) | (N     | one)  | 1.006  | 0.00      |
| 8    | 3       | Х              | (Non   | e)      |         | None  | 6.7    | 138.3  | 130.0  | (None) | (N     | one)  | 1.006  | 0.00      |
| 8    | 2       | х              | (Non   | e)      |         | None  | 6.7    | 146.7  | 138.3  | (None) | (N     | one)  | 1.006  | 0.00      |
| 8    | 1       | х              | (Non-  | e)      |         | None  | 6.7    | 155.0  | 146.7  | (None) | (N     | one)  | 1.006  | 0.00      |
| 7    | 3       | х              | (Non   | e)      |         | None  | 6.7    | 163.0  | 155,0  | (None) | (N     | one)  | 1.006  | 0.00      |

Page B l

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# File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower Date and Time: 4/30/2009 9:35:58 AM

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|----------|-----|-------|--------------|---|
|          |     | Peori | la, Illinois |   |

| Conti<br>Proje | ract: | 250ft | 6409<br>ROHN SSV Tower |                    | Revisi<br>Site: |       |       |           |           |       |      |
|----------------|-------|-------|------------------------|--------------------|-----------------|-------|-------|-----------|-----------|-------|------|
| Date           | and   | Time: | 4/30/2009 9:35:58 AM   | Engineer: AMKW/DWG |                 |       |       |           |           |       |      |
| 7              | 2     | х     | (None)                 | None               | 6.7             | 171.0 | 163.0 | (None)    | (None)    | 1.006 | 0.00 |
| 7              | 1     | х     | (None)                 | None               | 6.7             | 179.1 | 171.0 | (None)    | (None)    | 1.006 | 0.00 |
| 6              | 2     | Х     | (None)                 | None               | 10.0            | 191.5 | 179.1 | (None)    | (None)    | 1.509 | 0.00 |
| 6              | 1     | х     | (None)                 | None               | 10.0            | 203.9 | 191.5 | (None)    | (None)    | 1.509 | 0.00 |
| 5              | 2     | х     | (None)                 | None               | 10.0            | 215.9 | 203.9 | (None)    | (None)    | 1.509 | 0.00 |
| 5              | 1     | Х     | (None)                 | None               | 10.0            | 228.0 | 215.9 | (None)    | (None)    | 1.509 | 0.00 |
| 4              | 2     | х     | (None)                 | None               | 10.0            | 240.0 | 228.0 | (None)    | (None)    | 1.509 | 0.00 |
| 4              | 1     | х     | (None)                 | None               | 10.0            | 252.0 | 240.0 | (None)    | (None)    | 1.509 | 0.00 |
| 3              | 2     | Х     | (None)                 | None               | 10.0            | 264.0 | 252.0 | (None)    | (None)    | 0.000 | 0.00 |
| 3              | 1     | х     | (None)                 | None               | 10.0            | 276.0 | 264.0 | (None)    | (None)    | 0.000 | 0.00 |
| 2              | 2     | х     | (None)                 | None               | 10.0            | 288.0 | 276.0 | (None)    | (None)    | 0.000 | 0.00 |
| 2              | 1     | Х     | (None)                 | None               | 10.0            | 300.0 | 288.0 | (None)    | (None)    | 0.000 | 0.00 |
| 1              | 1     | ĸ     | 2-Subdiv.              | Yes                | 20.0            | 332.2 | 302.2 | 2-Subdiv. | 2-Subdiv. | 0.000 | 0.00 |

MEMBER PROPERTIES

| Sec/<br>Pnl                      | Туре        | Description                   | Steel<br>Grade  | Conn.<br>Type       | Bolt<br>#-Size     | Bolt<br>Grade  | End<br>Dist. | Edge<br>Dist. | Gusset<br>Thick. | Bolt<br>Space | Dble Member<br>Spacing<br>Mem. Stitch<br>Bolt |
|----------------------------------|-------------|-------------------------------|-----------------|---------------------|--------------------|----------------|--------------|---------------|------------------|---------------|-----------------------------------------------|
| 13/3                             | Lea         | DIDE 2 875v0 203              | 1572 ar         | 50Tension           | (in)               | A325¥          | (in)         | (in)          | (in)             | (in)          | (in) (ft)                                     |
| $\frac{13}{3}$                   | Diag        | L1 $3/4x1 3/4x3/16$           | A36             | Bolted              | 1-0.625            | A325N          | 0.938        | 0.875         | 0.250            | 1.875         |                                               |
| $\frac{13}{2}$                   | Diag        | L1 3/4x1 3/4x3/16             | A372 gr.<br>A36 | Bolted              | 1-0.625            | A325N          | 0.938        | 0.875         | 0.250            | 1.875         |                                               |
| 13/1<br>13/1                     | Diag        | Ll 3/4x1 3/4x3/16             | A372 gr.<br>A36 | Bolted              | 1-0.625            | A325X<br>A325N | 0.938        | 0.875         | 0.250            | 1.875         |                                               |
| 12/5                             | Leg         | PIPE 3.500x0.216              | A572 gr.        | 50Tension           | 4-0.875            | A325X          | 0 0 2 0      | 1 000         | 0 350            | 1 075         |                                               |
| 12/5<br>12/4                     | Leg         | PIPE 3.500x0.216              | A36<br>A572 gr. | 50Tension           | 4-0.875            | A325X<br>A325X | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| 12/4<br>12/3                     | Diag<br>Leg | L2x2x1/4<br>PIPE 3.500x0.216  | A36<br>A572 gr. | Bolted<br>50Tension | 1-0.625<br>4-0.875 | A325X<br>A325X | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| 12/3<br>12/2                     | Diag<br>Leg | L2x2x1/4<br>PIPE 3.500x0.216  | A36<br>A572 gr. | Bolted<br>50Tension | 1-0.625<br>4-0.875 | A325X<br>A325X | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| $\frac{12}{2}$<br>$\frac{12}{1}$ | Diag<br>Leg | L2x2x1/4<br>PIPE 3.500x0.216  | A36<br>A572 gr. | Bolted<br>50Tension | 1-0.625<br>4-0.875 | A325X<br>A325X | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| 12/1                             | Diag        | L2x2x1/4                      | A36             | Bolted              | 1-0.625            | A325X          | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| $\frac{11}{5}$                   | Leg<br>Diag | PIPE 4.500x0.337              | A572 gr.        | 50Tension<br>Bolted | 4-1.000            | A325X          | 0 938        | 1 000         | 0 250            | 1 875         |                                               |
| $\frac{11}{4}$                   | Leg         | PIPE 4.500x0.337              | A572 gr.        | 50Tension           | 4-1.000            | A325X          | 0.020        | 1.000         | 0.250            | 1 075         |                                               |
| $\frac{11}{4}$ 11/3              | Leg         | PIPE 4.500x0.337              | A572 gr.        | 50Tension           | 4-1.000            | A325N<br>A325X | 0.938        | 1.000         | 0.250            | 1.8/5         |                                               |
| $\frac{11}{3}$<br>$\frac{11}{2}$ | Diag<br>Leg | L2x2x3/16<br>PIPE 4.500x0.337 | A36<br>A572 gr. | Bolted<br>50Tension | 1-0.625<br>4-1.000 | A325N<br>A325X | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| $\frac{11/2}{11/1}$              | Diag<br>Leg | L2x2x3/16<br>PIPE 4.500x0.337 | A36<br>A572 gr. | Bolted<br>50Tension | 1-0.625<br>4-1.000 | A325N<br>A325X | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| 11/1                             | Diag        | L2x2x3/16                     | A36             | Bolted              | 1-0.625            | A325N          | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| 10/4<br>10/4                     | Leg<br>Diaq | PIPE 5.563x0.375<br>L2x2x3/16 | A572 gr.<br>A36 | 50Tension<br>Bolted | 4-1.000<br>1-0.625 | A325X<br>A325N | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| 10/3<br>10/3                     | Leg<br>Diag | PIPE 5.563x0.375              | A572 gr.<br>A36 | 50Tension<br>Bolted | 4-1.000            | A325X<br>A325N | 0.938        | 1.000         | 0.250            | 1.875         |                                               |
| 10/2                             | Leg         | PIPE 5.563x0.375              | A572 gr.        | 50Tension           | 4-1.000            | A325X          | 0 0 0 0      | 1 000         | 0.250            | 1 075         |                                               |
| 10/1                             | Leg         | PIPE 5.563x0.375              | A572 gr.        | 50Tension           | 4-1.000            | A325X          | 0.000        | 1.000         | 0.250            | 1.075         |                                               |
| 10/1                             | Diag        | L2X2X3/16                     | A36             | ROTLED              | 1-0.625            | A325N          | 0.938        | T.000         | 0.250            | 1.875         |                                               |

Page B 2

TowerSoft Engineering software

TSTower - v 3.9.0 Tower Analysis Program (c) 1997-2006 TowerSoft www.TSTower.com

File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower Date and Time: 4/30/2009 9:35:58 AM Licensed to: ROHN Products LLC Peoria, Illinois

Revision: 0 Site: PRYORSBURG Engineer: AMKW/DWG

| 9/3<br>9/3<br>9/2 | Leg<br>Diag<br>Leg | PIPE 5.563x0.375<br>L2x2x1/4<br>PIPE 5.563x0.375 | A572 gr.50Te<br>A36 Bc<br>A572 gr.50Te | ension<br>olted<br>ension | 4-1.000<br>1-0.625<br>4-1.000 | A325X<br>A325X<br>A325X | 0.938          | 1.000 | 0.250 | 1.875 |
|-------------------|--------------------|--------------------------------------------------|----------------------------------------|---------------------------|-------------------------------|-------------------------|----------------|-------|-------|-------|
| 9/2<br>9/1        | Diag<br>Leq        | L2x2x1/4<br>PIPE 5.563x0.375                     | A36 Bc<br>A572 gr.50Te                 | lted                      | 1-0.625<br>4-1.000            | A325X<br>A325X          | 0.938          | 1.000 | 0.250 | 1.875 |
| 9/1               | Diag               | L2x2x1/4                                         | A36 BC                                 | lted                      | 1-0.625                       | A325X                   | 0.938          | 1.000 | 0.250 | 1.875 |
| 8/3<br>8/3        | Leg<br>Diag        | PIPE 6.625x0.340                                 | A572 gr.50Te                           | ension                    | 6 - 1.000                     | A325X                   | 0 929          | 1 250 | 0 250 | 1 500 |
| 8/2               | Leg                | PIPE 6.625x0.340                                 | A572 gr.50Te                           | ension                    | 6-1.000                       | A325X                   | 0.000          | 1.200 | 0.250 | 1,300 |
| 8/2<br>8/1        | Leg                | D2 1/2X2 1/2X3/16<br>PIPE 6.625x0.340            | A36 BC<br>A572 gr.50Te                 | ension                    | 1-0.625<br>6-1.000            | A325N<br>A325X          | 0.938          | 1.250 | 0.250 | 1.500 |
| 8/1               | Diag               | L2 1/2x2 1/2x3/16                                | A36 Bo                                 | lted                      | 1-0.625                       | A325N                   | 0.938          | 1.250 | 0.250 | 1.500 |
| 7/3<br>7/3        | Leg<br>Diag        | PIPE 6.625x0.432                                 | A572 gr.50Te                           | ension                    | 6-1.000<br>1-0.625            | A325X<br>A325X          | 0 938          | 1 500 | 0 250 | 2 250 |
| 7/2               | Leg                | PIPE 6.625x0.432                                 | A572 gr.50Te                           | ension                    | 6-1,000                       | A325X                   | 0 000          | 1 500 | 0.250 | 0 000 |
| 7/1               | Leg                | PIPE 6.625x0.432                                 | A572 gr.50Te                           | ension                    | 6-1.000                       | A325X<br>A325X          | 0.938          | 1.500 | 0.250 | 2.250 |
| 7/1               | Diag               | L3x3x3/16                                        | A36 Bc                                 | lted                      | 1-0.625                       | A325X                   | 0.938          | 1.500 | 0.250 | 2.250 |
| 6/2               | Leg<br>Diag        | PIPE 6.625x0.432                                 | A572 gr.50Te                           | ension                    | 6 - 1.000                     | A325X                   | 0 020          | סכם ו | 0 250 | 1 975 |
| 6/1               | Leg                | PIPE 6.625x0.432                                 | A572 gr.50Te                           | ension                    | 6-1.000                       | A325X                   | 0.000          | 1.000 | 0.200 | 1.075 |
| 6/1               | Diag               | L3x3x1/4                                         | A529 gr.50Bc                           | lted                      | 1-0.625                       | A325N                   | 0.938          | 1.938 | 0.250 | 1.875 |
| 5/2<br>5/2        | Leg<br>Diag        | PIPE 8.625x0.375<br>L3x3x1/4                     | A572 gr.50Te<br>A529 gr.50Bc           | ension<br>lted            | 8-1.000                       | A325X<br>A325X          | 0.938          | 1.938 | 0.250 | 1.875 |
| 5/1               | Leg                | PIPE 8.625x0.375                                 | A572 gr.50Te                           | ension                    | 8-1.000                       | A325X                   | 0 0 0 0        | 1 000 | 0.200 |       |
| 5/1               | Diag               | L3 1/2X3 1/2X1/4                                 | A529 gr.50BC                           | orted                     | 1-0.625                       | A325X                   | 0.938          | 1.938 | 0.250 | 1.875 |
| 4/2<br>4/2        | Leg<br>Diag        | PIPE 8.625x0.375<br>L3 1/2x3 1/2x1/4             | A572 gr.50Te<br>A529 gr.50Bc           | ension<br>olted           | 8-1.000<br>1-0.625            | A325X<br>A325X          | 0.938          | 2.387 | 0.250 | 1.875 |
| 4/1               | Leg                | PIPE 8.625x0.375                                 | A572 gr.50Te                           | ension                    | 8-1.000                       | A325X                   | 0 0 0 0        | 2 207 | 0 050 | 1 075 |
| 4/1               | Diag               | L3 1/2X3 1/2X1/4                                 | A529 gr.50BC                           |                           | 1-0.625                       | A325X                   | 0.938          | 2.387 | 0.250 | 1.8/5 |
| 3/2<br>3/2        | Leg<br>Diag        | PIPE 8.625x0.500<br>L4x4x1/4                     | A572 gr.50Te<br>A529 gr.50Bc           | ension<br>olted           | 8-1.000<br>1-0.625            | A325X<br>A325X          | 0.938          | 2.875 | 0.250 | 1.875 |
| 3/1               | Leg                | PIPE 8.625x0.500                                 | A572 gr.50Te                           | ension                    | 8-1.000                       | A325X                   | 0 0 0 0        | 2 075 | 0 250 | 1 075 |
| 5/1               | DIAG               | L4X4X1/4                                         | A529 gr.50bc                           |                           | 1-0.025                       | A325A                   | 0.938          | 2.0/5 | 0.250 | 1.0/5 |
| 2/2<br>2/2        | Leg<br>Diag        | PIPE 8.625x0.500<br>L4x4x1/4                     | A572 gr.50Te<br>A529 gr.50Bc           | nsion<br>olted            | 8-1.000<br>1-0.625            | A325X<br>A325X          | 0.938          | 2.875 | 0.250 | 1.875 |
| 2/1               | Leg                | PIPE 8.625x0.500                                 | A572 gr.50Te                           | ension                    | 8-1.000                       | A325X                   | 0 0 0 0        | 2 075 |       | 1 077 |
| 2/1               | Diag               | L4X4X1/4                                         | A529 gr.50BC                           | orred                     | 1-0.625                       | A325X                   | 0.938          | 2.8/5 | 0.250 | 1.8/5 |
| 1/1<br>1/1        | Leg<br>Diaq        | PIPE 8.625x0.500<br>PIPE 2.875x0.203             | A572 gr.50Te<br>A572 gr.50Bc           | ension 🌡<br>olted         | 2-1.000<br>3-0.750            | A325X<br>A325X          | 1.260          | 1.437 | 0.375 | 2.250 |
| 1/1               | Horiz              | PIPE 2.875x0.203                                 | A572 gr.50Bc                           | lted                      | 2-0.750                       | A325X                   | 1.181          | 1.437 | 0.375 | 1.875 |
| 1/1               | SecH1              | PIPE 2.3/5x0.154                                 | A572 gr.50Bc                           | outed                     | 1-0.625                       | A325X                   | 1.181<br>1 101 | 0.949 | 0.250 | 1.875 |
| $\frac{1}{1}$     | HipD1              | PIPE 2.875x0.203                                 | A572 gr.50BC                           | olted                     | 1-0.625                       | A325X                   | 1.181          | 1.437 | 0.250 | 1.875 |
| 1/1               | HipHl              | PIPE 1.500x0.12                                  | A572 gr.50Bc                           | lted                      | 1-0.625                       | A325X                   | 1.181          | 0.748 | 0.250 | 1.875 |
| 1/1               | PlanH1             | PIPE 2.375x0.154                                 | A572 gr.50Bc                           | olted                     | 1-0.625                       | A325X                   | 1.181          | 1.189 | 0.250 | 1.875 |

Page B 3



# File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower Date and Time: 4/30/2009 9:35:58 AM

Section D: TRANSMISSION LINE DATA

Transmission Lines Position

| No. | Bot El<br>(ft) | Top El<br>(ft) | Desc.     | Radius<br>(ft) | Az.    | Orient. | No . | No. of<br>Rows | Part<br>of Face | Vert. | Antenna |
|-----|----------------|----------------|-----------|----------------|--------|---------|------|----------------|-----------------|-------|---------|
| 1   | 0.00           | 252.00         | 3/8 CABLE | -1.32          | 0.00   | 0.00    | 1    | 1              | No              | Yes   |         |
| 2   | 220.00         | 250.00         | LDF7P~50A | 2.14           | 60.00  | 10.00   | 12   | 1              | Yes-Ou          | tNo   |         |
| 3   | 0.00           | 250.00         | TX Ladder | 12.43          | 60.00  | 10.00   | 1    | 1              | Yes-Ou          | tNo   |         |
| 4   | 0.00           | 240.00         | LDF7P-50A | 12.43          | 180.00 | 130.00  | 12   | 1              | Yes-Ou          | tNo   |         |
| 5   | 0.00           | 240.00         | TX Ladder | 12.43          | 180.00 | 130.00  | 1    | 1              | Yes-Ou          | tNo   |         |
| 6   | 0.00           | 230.00         | LDF7P-50A | 12.43          | 300.00 | 250.00  | 12   | 1              | Yes-Ou          | tNo   |         |
| 7   | 0.00           | 230.00         | TX Ladder | 12.43          | 300.00 | 250.00  | 1    | 1              | Yes-Ou          | tNo   |         |
| 8   | 0.00           | 220.00         | LDF7P-50A | 12.43          | 60,00  | 10.00   | 24   | 2              | Yes-Ou          | tNo   | r       |
|     |                |                |           |                |        |         |      |                |                 | v     |         |

### Transmission Lines Details

| No. | Desc.     | Width<br>(in) | Depth<br>(in) | Unit Mass<br>(lb/ft) | Line Spacing<br>(in) | Row Spacing<br>(in) |
|-----|-----------|---------------|---------------|----------------------|----------------------|---------------------|
| 1   | 3/8 CABLE | 0.38          | 0.38          | 1.00                 | 2.750                | 2.750               |
| 2   | LDF7P-50A | 2.01          | 2.01          | 0.92                 | 2.225                | 2.750               |
| 3   | TX Ladder | 4.70          | 1.50          | 4.00                 | 2,750                | 2.750               |
| 4   | LDF7P-50A | 2.01          | 2.01          | 0.92                 | 2.225                | 2.750               |
| 5   | TX Ladder | 4.70          | 1.50          | 4.00                 | 2.750                | 2.750               |
| 6   | LDF7P-50A | 2.01          | 2.01          | 0.92                 | 2,225                | 2.750               |
| 7   | TX Ladder | 4.70          | 1.50          | 4.00                 | 2.750                | 2.750               |
| 8   | LDF7P-50A | 2.01          | 2.01          | 0.92                 | 2.225                | 2.750               |

Page D 1

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Revision: 0

Site: PRYORSBURG Engineer: AMKW/DWG



### File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower Date and Time: 4/30/2009 9:35:58 AM

Revision: 0 Site: PRYORSBURG Engineer: AMKW/DWG

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Peoria, Illinois

Section F: POINT LOAD DATA

Structure Azimuth from North:0.00

POINT LOADS

| NO. | Description |    | Elev.  | Radius | Azim. | Orient. | Vertical<br>Offset | Tx Line | Comments |
|-----|-------------|----|--------|--------|-------|---------|--------------------|---------|----------|
|     |             |    | (ft)   | (ft)   | (Deg) | (Deg)   | (ft)               |         |          |
| 1   | Carrier # 1 | ,  | 250.00 | 1.00   | 0.0   | 0.0     | 0.00               |         |          |
| 2   | Carrier # 2 |    | 240.00 | 0.00   | 0.0   | 0.0     | 0.00               |         |          |
| 3   | Carrier # 3 | W. | 230.00 | 0.00   | 0.0   | 0.0     | 0.00               |         |          |
| 4   | Carrier # 4 |    | 220.00 | 0.00   | 0.0   | 0.0     | 0.00               |         |          |

### POINT LOADS WIND AREAS AND WEIGHTS

| No. | Description | Frontal   | Lateral   | Frontal   | Lateral   | Weight | Weight |
|-----|-------------|-----------|-----------|-----------|-----------|--------|--------|
|     |             | Bare Area | Bare Area | Iced Area | Iced Area | Bare   | Iced   |
|     |             | (ft^2)    | (ft^2)    | (ft^2)    | (ft^2)    | (Kips) | (Kips) |
| 1   | Carrier # 1 | 115.00    | 115.00    | 135.00    | 135.00    | 2.00   | 3.00   |
| 2   | Carrier # 2 | 115.00    | 115.00    | 135.00    | 135.00    | 2.00   | 3.00   |
| 3   | Carrier # 3 | 115.00    | 115.00    | 135.00    | 135.00    | 2.00   | 3.00   |
| 4   | Carrier # 4 | 115.00    | 115.00    | 135.00    | 135.00    | 2.00   | 3.00   |

1

Page F 1

TowerSoft Engineering software

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File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower Date and Time: 4/30/2009 9:35:58 AM Licensed to: ROHN Products LLC Peoria, Illinois

Revision: 0 Site: PRYORSBURG Engineer: AMKW/DWG

| Wind Direction         Maximum displacements           Node         Elev.<br>(ft)         N-S Disp<br>(in)         Vert.Disp<br>(in)         N-S Rot<br>(n)         W-E Rot<br>(Deg)         Twist<br>(Deg)           117         252.0         39.5         38.5         -0.2         1.79         -1.75         0.14           114         248.0         38.0         37.1         -0.2         1.78         1.75         0.14           111         244.0         36.5         35.6         -0.2         1.74         1.71         0.10           108         240.0         35.0         34.1         -0.2         1.74         1.71         0.10           102         232.0         31.2         -0.2         1.70         -1.63         0.09           99         228.0         30.6         29.9         -0.2         1.70         -1.63         0.09           93         220.0         27.9         27.2         -0.1         1.40         -1.37         0.08           87         212.0         25.4         24.8         -0.1         1.30         1.27         0.07           81         204.0         23.1         -22.5         -0.1         1.25         -1.23         0.07 <th>Section H:<br/>Load Combina</th> <th>STRUCTUR<br/>ation</th> <th>E DISPLAC<br/>M</th> <th><b>EMENT DAT</b><br/>ax Envelope</th> <th>A</th> <th></th> <th></th> <th></th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Section H:<br>Load Combina                           | STRUCTUR<br>ation                                                                                                                                                                                                                                                                    | E DISPLAC<br>M                                                                                                                                                                                                                                                                                         | <b>EMENT DAT</b><br>ax Envelope                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | A                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Node Elev. N-S Disp W-E Disp (in) Vert.Disp N-S Rot (Deg) (Deg) (Deg) (Deg)<br>117 252.0 39.5 38.5 -0.2 1.79 -1.75 0.14<br>114 248.0 38.0 37.1 -0.2 1.78 1.75 0.13<br>108 240.0 35.0 34.1 -0.2 1.74 1.71 0.10<br>105 236.0 33.5 32.7 -0.2 1.77 -1.73 -0.12<br>102 232.0 32.0 31.2 -0.2 1.76 -1.67 0.13<br>96 224.0 29.2 28.5 -0.1 1.52 -1.48 0.09<br>99 228.0 30.6 29.9 -0.2 1.70 -1.67 0.13<br>96 224.0 27.9 27.2 -0.1 1.57 1.54 0.13<br>90 216.0 26.6 -25.9 -0.1 1.40 -1.37 0.08<br>87 212.0 25.4 24.8 -0.1 1.47 -1.44 0.11<br>84 208.0 24.2 23.6 -0.1 1.37 -1.34 0.09<br>78 200.0 22.0 21.4 -0.1 1.37 -1.34 0.09<br>78 200.0 22.0 21.4 -0.1 1.37 -1.34 0.09<br>78 200.0 22.0 21.4 -0.1 1.25 -1.23 0.07<br>72 190.0 19.4 18.9 -0.1 1.25 -1.23 0.07<br>72 190.0 19.4 18.9 -0.1 1.11 1.09 0.05<br>63 173.3 15.6 -15.2 -0.1 1.02 -0.99 0.05<br>63 173.3 15.6 -15.2 -0.1 1.01 -0.99 0.04<br>66 180.0 17.0 -16.6 -0.1 1.02 -0.99 0.05<br>63 173.3 15.6 -15.2 -0.1 0.89 -0.87 0.04<br>57 160.0 12.9 -12.6 -0.1 0.89 -0.87 0.03<br>51 146.7 10.6 10.3 -0.1 0.78 0.76 0.03<br>51 146.7 10.6 10.3 -0.1 0.59 -0.58 0.02<br>32 120.0 6.8 6.6 -0.1 0.59 -0.58 0.02<br>33 100.0 4.6 -4.4 -0.1 0.59 -0.58 0.02<br>34 153.3 11.7 -11.4 -0.1 0.59 -0.58 0.02<br>35 1146.7 10.6 10.3 -0.1 0.67 0.66 0.03<br>35 1146.7 10.6 10.3 -0.1 0.78 0.76 0.03<br>35 1146.7 10.6 10.3 -0.1 0.59 -0.58 0.02<br>39 120.0 6.8 6.6 -0.1 0.59 -0.58 0.02<br>39 120.0 6.8 6.6 -0.1 0.47 -0.46 0.03<br>33 100.0 4.6 -4.4 -0.1 0.45 -0.44 0.01<br>30 90.0 3.6 3.5 -0.1 0.35 -0.33 0.01<br>24 70.0 2.9 -2.8 -0.1 0.35 -0.24 0.01<br>18 50.0 1.1 1.1 0.0 0.18 0.18 0.01<br>-0.10 0.01 | Wind Direct:                                         | ion                                                                                                                                                                                                                                                                                  | Ma                                                                                                                                                                                                                                                                                                     | aximum disp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Node Elev.<br>(ft)                                   | N-S Disp<br>(in)                                                                                                                                                                                                                                                                     | W-E Disp<br>(in)                                                                                                                                                                                                                                                                                       | Vert.Disp<br>(in)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | N-S Rot<br>(Deg)                                                                                                                                                               | W-E Rot<br>(Deg)                                                                                                                                                                                                                                                                                                                                             | Twist<br>(Deg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| 8         20.0         0.1         -0.1         0.0         0.03         -0.03         0.00           3         0.0         0.0         0.0         0.0         0.00         0.00         0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | 39.5<br>38.0<br>36.5<br>35.0<br>33.5<br>32.0<br>29.2<br>27.9<br>26.6<br>25.4<br>24.2<br>23.1<br>22.0<br>20.7<br>19.4<br>18.2<br>17.06<br>15.66<br>14.2<br>12.9<br>11.7<br>10.6<br>5.66<br>6.86<br>5.66<br>4.66<br>3.69<br>2.22<br>1.61<br>1.10<br>0.7<br>0.41<br>0.70<br>0.10<br>0.0 | 38.5<br>37.1<br>35.6<br>34.1<br>32.7<br>31.2<br>29.9<br>28.5<br>27.2<br>-25.9<br>24.8<br>23.6<br>-22.5<br>21.4<br>20.2<br>18.9<br>17.7<br>-16.6<br>-15.2<br>-13.8<br>-12.6<br>-11.4<br>10.3<br>9.2<br>-8.3<br>7.4<br>6.6<br>-5.4<br>-4.4<br>3.5<br>-2.8<br>-2.15<br>1.1<br>-0.7<br>-0.3<br>-0.1<br>0.0 | $\begin{array}{c} -0.2 \\ -0.2 \\ -0.2 \\ -0.2 \\ -0.2 \\ -0.2 \\ -0.2 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 \\ -0.1 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1.11 1.16 1.02 1.01 0.89 0.78 0.78 0.78 0.78 0.67 0.68 0.59 0.58 0.45 0.35 0.25 0.18 0.17 0.11 0.03 0.00 | $\begin{array}{c} -1.75\\ 1.75\\ -1.75\\ 1.71\\ -1.73\\ -1.63\\ -1.67\\ -1.48\\ 1.54\\ -1.37\\ -1.44\\ 1.27\\ -1.34\\ 1.18\\ -1.23\\ 1.09\\ 1.13\\ -0.99\\ -0.87\\ 0.99\\ -0.87\\ 0.99\\ -0.87\\ 0.76\\ 0.76\\ 0.66\\ -0.67\\ -0.58\\ 0.56\\ -0.67\\ -0.58\\ 0.56\\ -0.44\\ 0.35\\ -0.33\\ 0.26\\ -0.24\\ 0.18\\ -0.16\\ -0.10\\ -0.03\\ 0.00\\ \end{array}$ | 0.14<br>0.13<br>0.10<br>-0.12<br>0.09<br>0.13<br>0.09<br>0.13<br>0.09<br>0.13<br>0.09<br>0.13<br>0.09<br>0.07<br>0.09<br>0.06<br>0.07<br>0.05<br>0.06<br>0.05<br>0.06<br>0.05<br>0.04<br>0.03<br>0.03<br>0.03<br>0.03<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.02<br>0.01<br>0.02<br>0.01<br>0.01<br>0.00<br>0.00 |  |

Page H 1

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Section L: STRENGTH ASSESSMENT SORTED DATA Load Combination Max Envelope Wind Direction Maximum

| Sec | Pnl | Elev   | МТуре | Desc.                    | Len          | kl/r          | Gov.<br>comp. | Gov.<br>tens. | Max<br>Compr.         | Max<br>Tens. | Asses.<br>Ratio |
|-----|-----|--------|-------|--------------------------|--------------|---------------|---------------|---------------|-----------------------|--------------|-----------------|
|     |     | (ft)   |       |                          | (ft)         |               | (Kips)        | (Kips)        | (Kips)                | (Kips)       |                 |
| 13  | 3   | 248.00 | Leg   | PIPE 2.875x0.203         | 4.00         | 45.6          | 56.8          | 68.1          | 2.2                   | 0.9          | 0.04            |
| 13  | 2   | 244.00 | Leg   | PIPE 2.875x0.203         | 4.00         | 45.6          | 56.8          | 68.1          | 5.0                   | 3.2          | 0.09            |
| 13  | 1   | 240.00 | Leg   | PIPE 2.875x0.203         | 4.00         | 45.6          | 56.8          | 68.1          | 10.9                  | 8.6          | 0.19            |
| 12  | 5   | 236.00 | Leg   | PIPE 3.500x0.216         | 4.00         | 37.2          | 78.0          | 89.3          | 16.8                  | 13.4         | 0.22            |
| 12  | 4   | 232.00 | Leg   | PIPE 3.500x0.216         | 4.00         | 41.5          | 76.2          | 89.3          | 28.9                  | 24.7         | 0.38            |
| 12  | 3   | 228.00 | Leg   | PIPE 3.500x0.216         | 4.00         | 41.5          | 76.2          | 89.3          | 37.4                  | 32.6         | 0.49            |
| 12  | 2   | 224.00 | Leg   | PIPE 3.500x0.216         | 4.00         | 41.5          | 76.2          | 89.3          | 53.8                  | 47.4         | 0.71            |
| 12  | 1   | 220.00 | Leg   | PIPE 3.500x0.216         | 4.00         | 35.1          | 78.9          | 89.3          | 65.9                  | 59.5         | 0.84            |
| 11  | 5   | 216.00 | Leg   | PIPE 4.500X0.337         | 4.01         | 29.2          | 160.4         | 176.5         | 80.8                  | 72.5         | 0.50            |
| 11  | 4   | 212.00 | Leg   | PIPE 4.500x0.337         | 4.UI         | 32.0          | 157.9         | 176.5         | 93.1<br>100 C         | 84.0         | 0.59            |
| 11  | 3   | 208.00 | Leg   | PIPE 4.500x0.337         | 4.01<br>4.01 | 32.0          | 157.9         | 176.5         | 112 7                 | 93.3         | 0.65            |
| 11  | 4   | 204.00 | Leg   | PIPE 4.500x0.337         | 4.01<br>4.01 | 32.0          | 157.9         | 176.5         | 120.0                 | 102.7        | 0.71            |
| 10  | T   | 200.00 | цед   | PIPE 4.500x0.337         | 4.01         | 21.5          | 101.0         | 1/6.5         | 120.9                 | 110.5        | 0.75            |
| 10  | 4   | 190.00 | Leg   | PIPE 5.503X0.375         | 5.01         | 30.0<br>7 CE  | 221.3         | 104.4         | 140 0                 | 129.0        | 0.05            |
| 10  | 2   | 185 00 | Leg   | PTPE 5.505x0.375         | 5.01         | 32.7          | 218.0         | 104.4         | 140.0                 | 120.2 -      | 0.70            |
| 10  | 1   | 180 00 | Leg   | PTDF 5 563v0 375         | 5 01         | 22.7          | 220.0         | 194 4         | 158 2                 | 144 9        | 0.74            |
| 9   | 3   | 173.33 | Lea   | PIPE 5.563x0.375         | 6 68         | 40.9          | 209.5         | 184 4         | 168 4                 | 154 1        | 0.75            |
| 9   | 2   | 166.67 | Lea   | PIPE 5.563x0.375         | 6.68         | 43 6          | 206.3         | 184 4         | 178.6                 | 163 3        | 0.89 /          |
| 9   | 1   | 160.00 | Lea   | PTPE 5,563x0,375         | 6.68         | 39.6          | 211.1         | 184.4         | 189.3                 | 172.8        | 0 94            |
| 8   | 3   | 153.33 | Lea   | PIPE 6.625x0.340         | 6.68         | 33.8          | 238.8         | 268.7         | 198.5                 | 181.0        | 0.83            |
| 8   | 2   | 146.67 | Leq   | PIPE 6.625x0.340         | 6.68         | 36.1          | 236.2         | 268.7         | 208.1                 | 189.5        | 0.88            |
| 8   | 1   | 140.00 | Leq   | PIPE 6.625x0.340         | 6.68         | 32.7          | 240.1         | 268.7         | 216.6                 | 196.9        | 0.90            |
| 7   | 3   | 133.33 | Leg   | PIPE 6.625x0.432         | 6.68         | 34.2          | 298.7         | 276.6         | 226.2                 | 205.1        | 0.76            |
| 7   | 2   | 126.67 | Leg   | PIPE 6.625x0.432         | 6.68         | 36.5          | 295.3         | 276.6         | 235.0                 | 212.7        | 0.80            |
| 7   | 1   | 120.00 | Leg   | PIPE 6.625x0.432         | 6.68         | 33.1          | 300.3         | 276.6         | 244.6                 | 220.9        | 0.81 /          |
| б   | 2   | 110,00 | Leg   | PIPE 6.625x0.432         | 10.02        | 52.5          | 268.8         | 276.6         | 255.1                 | 229.8        | 0.95 🖌          |
| 6   | 1   | 100.00 | Leg   | PIPE 6.625x0.432         | 10.02        | 51.4          | 270.8         | 276.6         | 268.8                 | 241.3        | 0.99 💞          |
| 5   | 2   | 90.00  | Leg   | PIPE 8.625x0.375         | 10.02        | 39.6          | 335.8         | 368.8         | 281.2                 | 251.7        | 0.84            |
| 5   | 1   | 80.00  | Leg   | PIPE 8.625x0.375         | 10.02        | 38.7          | 337.3         | 368.8         | 295.0                 | 263.0        | 0.87            |
| 4   | 2   | 70.00  | Leg   | PIPE 8.625x0.375         | 10.02        | 39.6          | 335.8         | 368.8         | 307.9                 | 273.7        | 0.92            |
| 4   | 1   | 60.00  | Leg   | PIPE 8.625x0.375         | 10.02        | 38.7          | 337.3         | 368.8         | 321.5                 | 284.8        | 0.95 🖌          |
| 3   | 2   | 50.00  | Leg   | PIPE 8.625x0.500         | 10.02        | 39.6          | 440.8         | 368.8         | 334.5                 | 295.3        | 0.80            |
| 3   | Ţ   | 40.00  | Leg   | PIPE 8.625x0.500         | 10.02        | 39.6          | 440.8         | 368.8         | 348.1                 | 306.0        | 0.83            |
| 2   | 2   | 30.00  | Leg   | PIPE 8.625x0.500         | 10.02        | 39.6          | 440.8         | 368.8         | 360.6                 | 315.8        | 0.86            |
| 2   | Ţ   | 20.00  | Leg   | PIPE 8.625X0.500         | 10.02        | 39.6          | 440.8         | 368.8         | 373.6                 | 325.8        | 0.88            |
| Ŧ   | T   | 0.00   | гед   | PIPE 8.625X0.500         | 20.06        | 39.6          | 440.8         | 368.8         | 381.0                 | 329.1        | 0.89            |
| 13  | 3   | 248.00 | Diag  | Ll 3/4x1 3/4x3/16        | 6.13         | 101.0         | 8.6           | 6.0           | 1.1                   | 1.3          | 0.22            |
| 13  | 2   | 244.00 | Diag  | L1 3/4x1 3/4x3/16        | 6.13         | 101.0         | 8.6           | 6.0           | 2.8                   | 2.5          | 0.42            |
| 13  | 1   | 240.00 | Diag  | L1 3/4x1 3/4x3/16        | 6.13         | 101.0         | 8.6           | 6.0           | 2.7                   | 2.9          | 0.49            |
| 12  | 5   | 236.00 | Diag  | L2x2x1/4                 | 6.14         | 91.1          | 12.3          | 9.1           | 5.1                   | 4.8          | 0.53            |
| 12  | 4   | 232.00 | Diag  | L2x2x1/4                 | 6.16         | 91.3          | 12.3          | 9.1           | 4.9                   | 5.2          | 0.57            |
| 12  | 3   | 228.00 | Diag  | L2x2x1/4                 | 6.18         | 91.6          | 12.3          | 9.1           | 6.4                   | 6.1          | 0.67            |
| 12  | 2   | 224.00 | Diag  | L2x2x1/4                 | 6.19         | 91.8          | 12.3          | 9.1           | 6.7                   | 6.9          | 0.77            |
| 12  | 1   | 220.00 | Diag  | L2x2x1/4                 | 6.21         | 92.0          | 12.3          | 9.1           | 7.2                   | 6.9          | 0.76            |
| 11  | 5   | 210.00 | Diag  | ц2X2X3/16<br>Гоногия (16 | 6.38         | 95.3          | 8.6           | ь.8<br>С 0    | 5./                   | 5.6          | 0.82 *          |
| 11  | 4   | 212.00 | Diag  | L2X2X3/10                | 0./1         | 99.4<br>102 F | 8,6           | ь.8<br>С 0    | ວ. <del>3</del><br>ສຳ | 5.4          | 0.79            |
| 11  | د   | 208.00 | Diag  | LZXZX3/10                | 1.04         | 103.5         | 8.0           | в.8           | <b>J.</b> T           | 5.0          | 0./4            |

Page L 1

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Revision: 0 Site: PRYORSBURG Engineer: AMKW/DWG

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TSTower - v 3.9.0 Tower Analysis Program (c) 1997-2006 TowerSoft www.TSTower.com

File: W:\Jobs\2009\060-6409\060-6409.out Contract: 060-6409 Project: 250ft ROHN SSV Tower

Site: PRYORSBURG Date and Time: 4/30/2009 9:35:58 AM Engineer: AMKW/DWG 11 2 204.00 Diag 11 1 200.00 Diag L2x2x3/16 L2x2x3/16 7.39 107.7 8.6 6.8 4.9 4.9 7.74 111.9 8.6 6.8 4.8 4.7 10 4 195.00 Diag L2x2x3/16 122.0 8.6 6.8 5.0 5.1 10 З 190.00 Diag L2x2x3/16 9.08 128.7 8.5 6.8 5.0 4.9 10 2 185.00 Diag L2x2x3/16 9.50 135.4 7.7 6.8 4,8 4.9 10 1 180.00 Diag L2x2x3/169.93 142.2 7.0 6.8 4.9 4.8 173.33 Diag 9 3 L2x2x1/411.33 164.5 6.9 9.1 5.2 9 2 166.67 Diag L2x2x1/411.88 173.2 6.2 9.1 5.2 9 1 160.00 Diag L2x2x1/412.44 182.0 5.6 9.1 5.2 L2 1/2x2 1/2x3/16 3 153.33 Diag 13.02 150.7 7.9 6.8 5.0 4.9 2 146.67 Diag L2 1/2x2 1/2x3/16 13.62 158.2 7.2 6.8 5.0 1 140.00 Diag L2 1/2x2 1/2x3/16 14.23 165.9 6.5 6.8 5.2 5.1 3 133.33 Diag L3x3x3/16 14.84 143.7 10.5 6.8 5.5 7 2 126.67 Diag L3x3x3/16 15.44 149.9 9.7 5.8 6.8 1 120.00 Diag L3x3x3/16 16.04 156.1 8.9 6.8 5.8 5.9 2 110.00 Diag L3x3x3/16 18.40 181.4 6.6 6.8 6.4 100.00 Diag L3x3x1/4 19.27 190.4 7.9 1 8.6 6.5 6.6 2 90.00 Diag L3x3x1/420.15 197.3 7.4 10.2 7.1 7.0 80.00 Diag L3 1/2x3 1/2x1/4 21.03 176.3 10.8 10.2 1 7.3 7.3 2 70.00 Diag L3 1/2x3 1/2x1/4 21.92 184.1 9.9 10.2 7.6 7.5

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Section N: LEG REACTION DATA Load Combination Max Wind Direction Max Max Envelope Maximum

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Revision: 0 Site: PRYORSBURG Engineer: AMKW/DWG

Page N 1

# **AMERICAN TOWER®**

## CORPORATION

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

# 273412 - PRYORSBURG KY, KY

PROJECT DESCRIPTION:

PRIMARY FOUNDATION DESIGN FOR A 250' "ROHN" SELF-SUPPORTING TOWER.

DESCRIPTION CONTRACTOR NAME CONTRACTOR REPRESENTATIVE CONTRACTOR REPRESENTATIVE REDEVELOPMENT P.M. (PRINT N REDEVELOPMENT P.M. (SIGNATU

PROJECT SUMMARY

CUSTOMER: OPERATIONS STRUCTURAL

- SITE NUMBER: 273412
  - SITE NAME: PRYORSBURG KY, KY
- SITE ADDRESS: SR-58 MAYFIELD, KY 42066
- PROPERTY OWNER: AMERICAN TOWER CORPORATION
- ATC JOB NUMBER: 43692372A

DATE: 7/10/09

**REVISION: 0** 



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

| DRAWING INDEX  |                                                  |          |  |  |  |  |  |
|----------------|--------------------------------------------------|----------|--|--|--|--|--|
| DRAWING NUMBER | DRAWING TITLE                                    | REVISION |  |  |  |  |  |
| BOM            | BILL OF MATERIALS (1 PAGE)                       | Û        |  |  |  |  |  |
| IGN            | IBC GENERAL NOTES                                | 0        |  |  |  |  |  |
| A-1            | DRILLED PIER FOUNDATION DETAILS                  | 0        |  |  |  |  |  |
| A-2            | BAR LIST FOR REINFORCING STEEL AND GENERAL NOTES | 0        |  |  |  |  |  |
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| FABRICATION DRAWING INDEX |               |          |  |  |  |  |  |
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| JRE)           |              |      |

## **AMERICAN TOWER®**

CORPORATION

| 8505 FREEPORT PARKWAY<br>SUITE 135<br>IRVING, TX 75063<br>PHONE: (972) 999-8900 / FAX: (972) 999-8940 |                     |                       |                    |                   |                |            |                                        |                                                                                                                 |                                                    |                                                                               |                                                                                                                                                                                                                                    |                                        |
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| CUSTOMER                                                                                              |                     | SITE NUMBER SITE NAME |                    | ATC J             | ATC JOB NUMBER |            | SITE ADDRESS                           |                                                                                                                 | DATE                                               | DRAWING NUMBER                                                                | REVISION                                                                                                                                                                                                                           |                                        |
| OPERATIONS STRUCTURAL                                                                                 |                     |                       | 273412             | PRYORSBURG KY, KY | 43692372A      |            | ٩                                      | SR-58<br>MAYFIELD, KY 42066                                                                                     |                                                    | 7/10/09                                                                       | ВОМ                                                                                                                                                                                                                                | 0                                      |
| BILL OF MATERIALS                                                                                     |                     |                       |                    |                   |                |            |                                        |                                                                                                                 |                                                    |                                                                               |                                                                                                                                                                                                                                    |                                        |
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|                                                                                                       |                     |                       | REBARS             | A                 |                | 4 44 4 (0) | A 1 A D                                | 1400                                                                                                            |                                                    |                                                                               |                                                                                                                                                                                                                                    |                                        |
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### **GENERAL**

- 1. ALL METHODS, MATERIALS AND WORKMANSHIP SHALL FOLLOW THE DICTATES OF GOOD CONSTRUCTION PRACTICE.
- 2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
- 3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB
- 4. ANY SUBSTITUTIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- 5. ANY MANUFACTURED DESIGN ELEMENTS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
- 6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
- 7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
- 8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.
- 9.) FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
- 10.) ALL FIELD CUT SURFACES SHALL BE REPAIRED WITH ZRC GALVALITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

### APPLICABLE CODES AND STANDARDS

- 1. ANSI/TIA/EIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-F EDITION.
- 2. KENTUCKY BUILDING CODE 2007 AND 2006 INTERNATIONAL BUILDING CODE.
- 3. ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-99.
- 4. CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION
- 5. AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- 6. AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

### STRUCTURAL STEEL

- 1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION
- 2. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- 3. ALL U-BOLTS SHALL BE ASTM A307 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE

### WELDING

- 1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
- 2. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, U.N.O.
- 3. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
- 4. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVALITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

### PAINT

1<sup>u</sup>

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

### BOLT TIGHTENING PROCEDURE

- 1. TIGHTEN FLANGE BOLTS BY AISC "TURN OF THE NUT" METHOD, USING THE CHART BELOW:
- BOLT LENGTHS UP TO AND INCLUDING FOUR DIA.
- 3/4" BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH +1/3 TURN BEYOND SNUG TIGHT 7/8" BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH +1/3 TURN BEYOND SNUG TIGHT BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH +1/3 TURN BEYOND SNUG TIGHT 1-1/8" BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH +1/3 TURN BEYOND SNUG TIGHT 1-1/4" BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH +1/3 TURN BEYOND SNUG TIGHT 1-1/2" BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH +1/3 TURN BEYOND SNUG TIGHT
- BOLT LENGTHS OVER FOUR DIA. BUT NOT EXCEEDING 8 DIA.
- 3/4" BOLTS 4 25 TO 6.0 INCH LENGTH 7/8" BOLTS 3.75 TO 7.0 INCH LENGTH
- 1" BOLTS 4.25 TO 8.0 INCH LENGTH
- 1-1/8" BOLTS 4.75 TO 9.0 INCH LENGTH
- 1-1/4" BOLTS 5.25 TO 10.0 INCH LENGTH
- 1-1/2" BOLTS 6.25 TO 12.0 INCH LENGTH
- +1/2 TURN BEYOND SNUG TIGHT +1/2 TURN BEYOND SNUG TIGHT
- 2. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8(d)(1) OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS. LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

"FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8(d)(1) THROUGH 8(d)(4).

### 8(d)(1) TURN-OF-THE-NUT TIGHTENING.

BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8 (c), UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

3. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8 (c) OF THE SPECIFICATION

### SPECIAL INSPECTION

- THE FOLLOWING CONSTRUCTION WORK: a) STRUCTURAL WELDING b) HIGH STRENGTH BOLTS
- 2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE WITH KENTUCKY BUILDING CODE 2007 AND IBC 2006, SECTION 1704. UNLESS THE THE SPECIAL INSPECTIONS

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH KENTUCKY BUILDING CODE 2007 AND IBC 2006, SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR

BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT

N.T.S.

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#### GENERAL FOUNDATION CONSTRUCTION NOTES

- ALL REBAR (HORIZONTAL & VERTICAL) SHALL BE SECURELY WIRE TIED TO PREVENT DISPLACEMENT DURING POURING OF CONCRETE.
- 2. CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
- 3. REINFORCED CONCRETE CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ACI STANDARDS 318.
- 4. MINIMUM CONCRETE COVER OVER REBAR IS 3".
- BACKFILL SHALL BE SELECTED MATERIAL, WELL. COMPACTED IN LAYERS NOT EXCEEDING 12".
- 6. BACKFILL SHALL BE PLACED SO AS TO PREVENT ACCUMULATION OF WATER AROUND THE FOUNDATION.

REINFORCING MATERIAL SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION A615-85. ALL REBAR TO BE GRADE 60 (UNLESS NOTED). 7

8.

#### FOUNDATION AND ANCHOR TOLERANCES

- 1. VERTICAL EMBEDMENTS OUT OF PLUMB: 1.0 DEGREE.
- 2. DRILLED FOUNDATION OUT OF PLUMB: 1.0 DEGREE.
- 3. DEPTH OF FOUNDATION: PLUS 3" (76mm) OR MINUS 0".
- 5. CONCRETE DIMENSIONS: PLUS OR MINUS 1" (25mm).
- 6. REINFORCING STEEL PLACEMENT: PLUS OR MINUS 1/2" INCLUDING CONCRETE COVER.



Exhibit E

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**PATRIOT ENGINEERING** and Environmental, Inc.

Engineering Value for Project Success

Consulting Environmental, Geotechnical and Materials Engineers

July 1, 2009

Nsoro 10830 Penion Drive Louisville, Kentucky 40299

Attention: Michael Haggerty

RE: Report of Geotechnical Engineering Investigation **Pryorsburg Cell Tower 3133 State Route 58 Pryorsburg, Graves County, Kentucky** Patriot Project Number 5-09-0512

#### Dear Michael:

Submitted herewith is the report of our subsurface investigation for the abovereferenced project. This investigation was completed in general accordance with our Master Subcontract Agreement – Professional Services dated March 12, 2009.

This report includes detailed and graphic logs of the one (1) soil test boring drilled at the proposed site. Also included in the report are the results of laboratory tests performed on samples obtained from the site, and geotechnical recommendations pertinent to the foundation design and construction.

We appreciate the opportunity to have performed this geotechnical engineering investigation and are looking forward to working with you during the construction phase of the project. If you have any questions regarding this report or if we may be of any additional assistance regarding any geotechnical aspect of the project, please do not hesitate to contact our office.

WESLEY J. HEMP

Respectfully submitted, Patriot Engineering and Environmental, Inc.



Wesley J. Hemp, P.E., LEED AP

Richard I

Richard L. Johnson, P.E. Senior Project Engineer

Attachment: Report of Geotechnical Engineering Investigation

400 Production Court, Louisville, Kentucky 40299 (502) 961-5652 • (502) 961-9256 FAX • www.patrioteng.com

Offices in Indianapolis, Evansville, Fort Wayne, Lafayette, Terre Haute, and Dayton.

# TABLE OF CONTENTS

| 1.0 INTRODUCTION<br>1.1 General<br>1.2 Purpose and Scope                                                                                                              | <b>1</b><br>                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.0 PROJECT INFORMAT                                                                                                                                                  | ION1                                                                                                                                                                               |
| <ul> <li>3.0 SITE AND SUBSURFA</li> <li>3.1 Site Conditions</li> <li>3.2 Site Geology</li> <li>3.3 Subsurface Condition</li> <li>3.4 Groundwater Condition</li> </ul> | ACE CONDITIONS         2           2         2           2         2           2         2           2         2           2         2           2         2           3         3 |
| <ul> <li>4.0 DESIGN RECOMMENT</li> <li>4.1 Basis</li></ul>                                                                                                            | DATIONS                                                                                                                                                                            |
| 5.0 CONSTRUCTION C<br>5.1 Site Preparation<br>5.2 Foundation Excava<br>5.3 Structural Fill and F<br>5.4 Groundwater                                                   | ONSIDERATIONS 10<br>10<br>ations 10<br>Fill Placement Control 13<br>13                                                                                                             |
| 6.0 INVESTIGATIONAL P<br>6.1 Field Work<br>6.2 Laboratory Testing                                                                                                     | ROCEDURES14<br>14<br>g14                                                                                                                                                           |
| 7.0 ILLUSTRATIONS                                                                                                                                                     |                                                                                                                                                                                    |
| APPENDICES<br>Appendix A:                                                                                                                                             | Site Vicinity Map<br>Boring Location Map<br>Boring Logs<br>Boring Log Key<br>Unified Soils Classification                                                                          |
| Appendix B:                                                                                                                                                           | General Qualifications<br>Standard Clause for Unanticipated Subsurface Conditions                                                                                                  |

## **REPORT OF GEOTECHNICAL ENGINEERING INVESTIGATION**

Pryorsburg Cell Tower 3133 State Route 58 Pryorsburg, Graves County, Kentucky Patriot Project No. 5-09-0512

# **1.0 INTRODUCTION**

#### 1.1 General

Nsoro is planning the construction of a new cell tower located in Pryorsburg, Kentucky just southwest of Mayfield. The results of our geotechnical engineering investigation for the project are presented in this report. This investigation was carried out in general accordance with our Master Subcontract Agreement – Professional Services dated March 12, 2009.

#### 1.2 Purpose and Scope

The purpose of this investigation was to determine the general near surface and subsurface conditions within the project area and to develop the geotechnical engineering recommendations necessary for the design and construction of the structure. This was achieved by drilling a soil test boring at the center of the tower location, and by conducting laboratory tests on samples taken from the boring. This report contains the results of our findings, an engineering interpretation of these results with respect to the available project information, and recommendations to aid in the design and construction of the proposed cell tower facility.

## 2.0 PROJECT INFORMATION

The proposed project includes a 254 ft. monopole cell tower to be constructed on a vacant parcel in Pryorsburg, KY. Structural loading information for this project was not available at the time of this report. However, we estimate that the tower loads will not exceed the following loading conditions:

| Vertical (Downward) Load: | 600 kips |
|---------------------------|----------|
| Horizontal Shear:         | 80 kips  |
| Uplift:                   | 500 kips |

It is understood that the project will also include the development of a fenced-in

compound area which will include a small equipment building. We anticipate that wall loads for the proposed building will not exceed 1.5 kips per lineal foot and floor slab loads will not exceed 150 psf.

# 3.0 SITE AND SUBSURFACE CONDITIONS

## 3.1 Site Conditions

The area for the proposed cell tower is located on the south side of State Route 58, approximately 0.4 miles west of the Julian M. Carroll Purchase Parkway. The area of the tower location was covered with grass and weeds. Remnants of an old barn were located adjacent to the test boring location. Various other types of debris were also scattered across the site including wood and organics. Soft subgrade conditions were noted during our site visit.

## 3.2 Site Geology

Information pertaining to soil characteristics in the project area was obtained through the Kentucky Geological Society Website and Interactive GIS Map.

The site is located in the Mississippi Embayment Region in south-western Kentucky, in the Mississippi River Valley. Soils in this area consist of continental deposits that are a mixture of silt, sand, clay, and gravel of Tertiary to Quaternary in age which were carried by river or stream currents and deposited on the older overlying bedrock. Information obtained from old water well records indicates that bedrock is likely deeper than 100 feet in this area.

## 3.3 Subsurface Conditions

Our interpretation of the subsurface conditions is based upon widely spaced soil borings drilled at the approximate locations shown on the Boring Location Map in Appendix A. The following discussion is general; for more specific information, please refer to the boring logs presented in Appendix A. It should be noted that the dashed stratification lines shown on the soil boring logs indicate approximate transitions between soil types. In situ stratification changes could occur gradually or at different depths. All depths discussed below refer to depths below the existing ground surface.

| Pryorsburg Cell Tower | Nsoro                         |
|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

The parcel is generally covered with topsoil, a surficial layer of material that is a blend of silts, sands, and clays, with varying amounts of organic matter. The topsoil layer was about 2 inches thick in the test boring.

Below the topsoil surface cover, the boring encountered silty clay described as light brown mottled gray, moist, and soft to stiff to a depth of 3.5 feet. Stiff to very stiff brown and gray silty clay was encountered from 3.5 to 8.5 feet. Below this layer, the boring encountered silty clay described as red and brown, moist, and stiff to very stiff to a depth of approximately 18.5 feet. Sandy clay described as red, moist, and stiff to very stiff was encountered to a depth of 23.5 feet, and was underlain by very stiff, light brown silty clay with fine to coarse weathered chert pebbles to a depth of 28.5 feet. Silty sand described as yellowish brown to white in color, fine-grained, very moist to saturated and dense was encountered between depths of 28.5 feet and 40 feet, the termination depth.

Standard Penetration Test blow counts (N-values) blows were 5 blows per foot (bpf) in the upper 3.5 feet, 15 to 16 bpf between 3.5 and 23.5 feet, and from 30 to 42 bpf below 23.5 feet. Natural moisture contents in these soils ranged from 8 to 29 percent. Unconfined compressive strengths ranged from 1.25 to 2.5 tsf (tons per square foot) for the cohesive (clayey) samples.

#### 3.4 Groundwater Conditions

Groundwater was encountered during drilling at a depth of 33.5 feet, and at the completion of drilling at a depth of 28.0 feet.

The term groundwater, for the purpose of this report, pertains to any water that percolates through the naturally occurring soil materials found on site. This includes any overland flow that permeates through a given depth of soil, perched water, and water that occurs below the "water table", a zone that remains saturated and water bearing year round.

It should be recognized that fluctuations in the groundwater level should be expected to occur due to variations in rainfall and other environmental or physical factors at the time measurements are made. The true static groundwater level can only be determined through observations made in cased holes over a long period of time, the construction of which was beyond the scope of this investigation.

# 4.0 DESIGN RECOMMENDATIONS

#### 4.1 Basis

Our recommendations are based on data presented in this report, which include soil borings, laboratory testing and our experience with similar projects. Subsurface variations that may not be indicated by a dispersive exploratory boring program can exist on any site. If such variations or unexpected conditions are encountered during construction, or if the project information is incorrect or changed, we should be informed immediately since the validity of our recommendations may be affected. Refer to Appendix B for additional qualifications and contractual considerations.

## 4.2 Tower Foundation

## **Drilled Piers**

The structure may be supported on a deep foundation system consisting of drilled piers. Drilled piers may be designed using the net allowable end bearing pressures and allowable skin friction values shown in the table below.

| Depth     | Soil Type  | Allowable | Allowable End  | Angle of   | Cohesion |
|-----------|------------|-----------|----------------|------------|----------|
| Range     |            | Skin      | Bearing        | Shearing   | (psf)    |
| (feet)    |            | Friction  | Pressure (psf) | Resistance |          |
|           |            | (psf)     |                | (degrees)  |          |
| 0-5       | Silty Clay | Ignore    | Ignore         | Ignore     | Ignore   |
| 5-18.5    | Silty Clay | 360       | 5,900          | 0          | 1900     |
| 18.5-23.5 | Sandy Clay | 380       | 6,300          | 0          | 2000     |
| 23.5-28.5 | Silty Clay | 720       | 12,000         | 0          | 4000     |
| 28.5-40   | Silty Sand | 800       | *14,000-       | 38         | Ignore   |
|           |            |           | 16,000         |            |          |

\* Increases linearly with depth.

Development of the design capacity is based on the following conditions or criteria:

• Drilled Piers should be designed as straight shaft and have a minimum diameter of 30 inches and be installed to a minimum depth of four times the pier diameter.

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|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

- Belling of piers may be performed for piers bearing on silty clay.
- The center-to-center spacing of the shafts will be a minimum of 2.5 pier diameters.
- Load applied to the shaft cap is uniformly distributed to each of the piers.
- Shafts should be constructed in accordance with the recommendations for shaft construction in Section 5.1 of this report.
- The drilled piers should be installed by a specialty contractor experienced in drilled pier installation.

For drilled pier design, the net allowable end bearing pressure is based on loads applied at the pier cap. The weight of the pier or the pier cap need not be included in the downward axial load used to dimension the pier.

## Mat Foundation

Alternatively, the cell tower may be supported using a mat foundation bearing on native clay at a depth of at least 4 feet. The maximum allowable bearing pressure for mat foundation design should not exceed the values shown in the table below.

| Depth Range (feet) | Soil Type       | Allowable Bearing Pressure (psf) |
|--------------------|-----------------|----------------------------------|
| 0-4                | Silty lean clay | Ignore                           |
| 4-6                | Silty lean clay | 3,000                            |
| >6                 | Silty lean clay | 4,200                            |

The thickness of the mat should be sufficient to support the tower as a rigid mat without flexure. For mat foundation design, we recommend that the modulus of subgrade reaction, " $K_{30}$ ", not exceed **100** pounds per cubic inch. A cohesion value of **1900** psf or a friction coefficient of **0.55** may be utilized to determine sliding resistance for a mat foundation bearing on silty lean clay or crushed stone backfill, respectively. It should be noted that the cohesion and friction coefficient values provided above do not include factors of safety.

The mat should be constructed in compliance with the recommendations discussed in the Construction Considerations (Section 5.0) of this report.

| Pryorsburg Cell Tower | Nsoro                         |
|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

A detailed settlement analysis was beyond the scope of this report; however, we estimate that the total settlement of the mat foundation bearing on native stiff clay should not exceed approximately 1 inch. Careful field control during construction is necessary to minimize the actual settlement that will occur.

## 4.3 Maintenance Building Foundations

It should be noted that a test boring was not performed for the Maintenance Building foundation since the location of the building has yet to be determined. Therefore, the recommendations provided below are based upon information obtained from the test boring performed at the center of the tower location.

The proposed structure can be supported on spread footings bearing on stiff clay or on structural fill overlying the same at normal shallow depths. These footings may be proportioned using net allowable soil bearing pressures not exceeding 2,400 pounds per square foot (psf) for wall footings, provided that the foundations bear at a depth of at least 4 feet below existing grade, or on structural fill after overexcavating to 4 feet, and that the foundations are constructed in compliance with the recommendations discussed in Section 5.0 of this report.

In using the above net allowable soil bearing pressures, the weight of the foundation and backfill over the foundation need not be considered. Hence, only loads applied at or above the minimum finished grade adjacent to the footing need to be used for dimensioning the foundations. Each new foundation should be positioned so it does not induce significant pressure on adjacent foundations; otherwise the stress overlap must be considered in the design.

All exterior foundations and foundations in unheated areas should be located at a depth of at least 24 inches below final exterior grade for frost protection. We recommend that strip footings be at least 18 inches wide and column footings be at least 24 inches wide. We estimate that the total foundation settlement should not exceed approximately 1 inch and that differential settlement should not exceed about <sup>3</sup>/<sub>4</sub> inch for footings bearing at shallow depths on stiff clay or structural fill. Careful field control during construction is necessary to minimize the actual settlement that will occur.

| Pryorsburg Cell Tower | Nsoro                         |
|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

Positive drainage of surface water, including downspout discharge, should be maintained away from structure foundations to avoid wetting and weakening of the foundation soils both during construction and after construction is complete.

#### 4.4 Floor Slabs

The stiff silty clay soil encountered in the test boring is suitable for floor slab report after the removal of any shallow soft clay has taken place. Based upon the conditions in the test boring, we estimate that the upper 24 inches of clay subgrade will require over-excavation and replacement or moisture conditioning prior to construction of floor slabs. Due to the low site elevation and proneness of the area to flooding, some additional undercutting to remove shallow clays with high moisture contents may be required prior to the placement of the granular base course, depending upon seasonal conditions.

If floor slabs are to be constructed in the area of the old barn, care should be taken to ensure that the barn foundations and other remnants are completely removed from the floor slab area.

We recommend that all floor slabs be designed as "floating", that is, fully ground supported and not structurally connected to walls or foundations. This is to minimize the possibility of cracking and displacement of the floor slab because of differential movements between the slab and the foundation. Although the movements are estimated to be within the tolerable limits for the structural safety, such movements could be detrimental to the slabs if they were rigidly connected to the foundations.

The building floor slab should be supported on a minimum 6-inch thick, granular base course, bearing on a suitably prepared subgrade (refer to Section 5.0 Construction Considerations). The granular base course is expected to help distribute loads and equalize moisture conditions beneath the slab. All slabs should be liberally jointed and designed with the appropriate reinforcement for the anticipated loading conditions.

| Pryorsburg Cell Tower | Nsoro                         |
|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

#### 4.5 Modulus of Subgrade Reaction

A modulus of subgrade reaction, " $K_{30}$ ", value of **100** pounds per cubic inch (pci) is recommended for the design of ground supported floor slabs. It should be noted that the " $K_{30}$ " modulus is based on a 30-inch diameter plate load test and a CBR value of **2.0**.

#### 4.6 Access Road and Parking Area

No test borings were performed for the tower access drive. It is possible that conditions different than those encountered at the tower location may exist along the access drive. Therefore, the following discussion should be considered general in nature in regards to access road and parking areas.

The near surface lean clay (CL) soil encountered in the test boring is generally suitable for support of the access road and parking area after some remediation. The near surface soil encountered in the test boring was soft and may require some overexcavation and replacement (probably 24 inches or less) prior to placement of the granular base course.

Based upon information provided in the project Site Data Package, the access drive/parking lot design for this project will consist of 3" to 6" of crushed stone fill. A pavement section without asphalt or concrete surface cover will require regular maintenance due to degradation of soils caused by inclement weather, vegetation growth, and vehicular traffic. Therefore, the pavement section will require routine maintenance to keep the access drive and parking areas functional. Given that the area is prone to flooding, some consideration should be given to increasing the crushed stone base thickness and/or utilizing Geogrid beneath the crushed stone roadway to provide separation from the clay subgrade and additional support for the access drive. If not properly prepared, the access drive and/or parking lot area may require additional maintenance beyond what is typical.

Depending upon the time of year in which access road and parking areas are constructed the exposed subgrade may be soft. If soft areas are encountered during construction, the areas should be undercut and replaced with approved compacted structural fill as outlined in section 5.0 of this report. If construction is performed during a wet or cold period, the contractor will need to exercise care during the grading and fill placement activities in order to achieve the necessary subgrade soil support for the

| Pryorsburg Cell Tower | Nsor                          |
|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

access road (See Section 5.0 for Construction Considerations).

The base soil for the access road and parking will need to be firm and dry. The subgrade should be sloped properly in order to provide good base drainage. To minimize the effects of groundwater or surface water conditions, the base section for the driveway should be sufficiently high above adjacent ditches and properly graded to provide adequate drainage.

Our recommendations are based on the assumption that the access drive and parking areas will be constructed on proofrolled natural soils, or on structural fill overlying the same. Serviceable pavements can be achieved by different combinations of materials and thickness, varied to provide roughly equivalent strengths. In addition, local practice for existing pavement construction should be reviewed for other blends, combinations of materials that have been found satisfactory, and for applicable minimum standards.

#### 4.7 Seismic Considerations

We have reviewed Section 1615 of the 2007 Kentucky Building Code (Modified 2006 International Building Code) with respect to the subsurface conditions disclosed by our geotechnical investigation and the following recommendations and comments are presented for your use in developing the seismic design criteria for the structural design. For structural design purposes, we recommend using a **Site Class of C** as defined by the 2007 Kentucky Building Code. Other earthquake resistant design parameters should be applied consistent with the minimum requirements of the Kentucky Building Code. The Site Class of C was based on clay with an average undrained shear strength of 1800 psf to a depth of 25 feet, dense sand with an average N-value of 40 blows per foot (bpf) from 25 feet to 50 feet, and very dense sand and/or gravel with an average N-value of 60 bpf from 50 to 100 feet.

# 5.0 CONSTRUCTION CONSIDERATIONS

## 5.1 Site Preparation

All areas that will support foundations, floors, pavements or newly placed structural fill must be properly prepared. All loose surficial soil, topsoil, fill and other unsuitable materials must be removed. Unsuitable materials include: **surficial trash and debris**, **old structure foundations**, old fill, frozen soil, relatively soft material, relatively wet soils, deleterious material, soils that exhibit a high organic content.

Prior to construction of floor slabs or pavements or the placement of new structural fill, the exposed subgrade (including the basement subgrade) must be evaluated by the Patriot representative. The evaluation should include proofrolling of the subgrade.

Care must be exercised during grading and fill placement operations. The combination of heavy construction equipment traffic and excess surface moisture can cause pumping and deterioration of the near surface soils. The severity of this potential problem depends to a great extent on the weather conditions prevailing during construction.

## 5.2 Foundation Excavations

## **Drilled Shaft Excavations**

The drilled shaft excavations should be observed by *Patriot's* geotechnical engineer or his representative to verify that the foundations will bear at the specified minimum depth and with the minimum bearing requirements, as recommended in Section 4.2 of this report. To confirm adequate bearing, *Patriot's* site representative will visually examine a sample of the soils taken at the proposed bearing depth. Surface runoff or seepage water should be drained away from the drilled pier excavation and not be allowed to collect in the excavation.

Additional recommendations for drilled pier foundation construction are presented below:

 If drilled pier excavations extend into the underlying sand layers, it is likely that casing and/or use of drilling fluid will be required to keep the excavation from collapsing. However, it should be noted that the use of drilling fluids can cause a reduction in shear strength and subsequent

| Pryorsburg Cell Tower | Nsoro                         |
|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

loss in skin friction capacity of the clay soils. Therefore, if drilled pier foundations are to bear in dense sand we recommend that the drilled piers be installed utilizing the dry method with vibratory casing installed into the sand layer in-lieu of the slurry method.

- The geotechnical engineer should be retained to document the shaft diameter, depth, cleanliness, plumbness, and type of end bearing material during pier construction.
- The foundation bearing material should be evaluated after the bottom of the 0 hole is leveled, cleared of any mud and extraneous materials, and dewatered.
- The drilling equipment should have the capacity to produce a torque of at least 500,000 inch-pounds and a downward force of at least 50,000 pounds.
- Temporary protective steel casing should be available to be installed in the pier, if necessary, to prevent sidewall collapse and excessive mud and water intrusion into the opened excavation. The casing may be extracted as the excavation is filled with concrete. However, the protective casing should not be removed until the weight of concrete placed into the pier exceeds the ground water head.
- A positive head of concrete (minimum of 5 feet) should be maintained above the bottom of the casing during withdrawal and the contractor should prevent concrete from "hanging-up" inside the shell, which may allow soil and water intrusion below the shell.
- If groundwater seepage into the drilled pier excavation is less than 20 gallons per minute, pumps should be used to maintain less than two inches of water. After observation and evaluation of the pier bottom by the geotechnical engineer, the pumps should be removed and concrete placement initiated immediately. If water is flowing into the hole at a rate greater than 20 gallons per minute, the geotechnical engineer should be consulted for guidance.
- Concrete with slumps ranging between four and seven inches should be used for backfilling the piers.
- Concrete placement into the drilled hole should be directed through a centering device located at the ground surface. If significant groundwater inflow is encountered, a tremie pipe should be used during the concrete placement.
- · Construction techniques used for drilled pier installation should conform to applicable Occupational Safety and Health Administration (OSHA) regulations.

| Pryorsburg Cell Tower | Nsoro                         |
|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

#### **Spread Footing & Mat Foundation Excavations**

The exposed soil subgrade in the base of the foundation (except for foundations bearing on structural backfill) should be observed by a *Patriot* site representative to confirm that bearing material of adequate strength has been reached. Any localized soft soil zones encountered at the bearing elevation should be further excavated until adequate support materials encountered. The cavity should be backfilled with structural fill as defined below. **Structural fill used as backfill beneath spread footings or mat foundations should be limited to compacted lean clay (CL), DGA or #57 Stone placed and compacted in accordance with Section 5.3.** 

When it is necessary to support the foundation on structural fill, then the fill pad must extend laterally a minimum distance beyond the edge of the mat foundation. The minimum structural pad width would correspond with a point at which an imaginary line extending downward from the outside edge of the footing at a 1H:2V slope intersects the surface of the natural soils. For example, if the depth to the bottom of excavation is 2 feet below the bottom of the foundation, the excavation would need to extend laterally beyond the edge of the footing at least 1 foot, as shown in Illustration A found at the conclusion of this report.

Excavation slopes should be maintained within OSHA requirements. In addition, we recommend that any surcharge fill or heavy equipment be kept at least 5 feet away from the edge of the excavation. In addition, excavations that occur near existing in-use foundations should be carefully performed, making a conscious effort not to undermine the support of the in-use foundations. If it is necessary to excavate soils adjacent to and below the bearing elevation of any in-use foundations *Patriot* should be contacted to make further recommendations regarding these excavations. Please refer to Illustration B in Appendix A for further details.

Construction traffic on the exposed surface of the bearing soils will potentially cause some disturbance of the subgrade and consequently loss of bearing capacity. However, the degree of disturbance can be minimized by proper protection of the exposed surface.

| Pryorsburg Cell Tower | Nsoro                         |
|-----------------------|-------------------------------|
| 3133 State Route 58   | Patriot Project No. 5-09-0512 |
| Mayfield, Kentucky    | July 1, 2009                  |

## 5.3 Structural Fill and Fill Placement Control

Structural fill, defined as any fill that will support structural loads, should be clean and free of organic material, debris, deleterious materials and frozen soils. Samples of the proposed fill materials should be tested prior to initiating the earthwork and backfilling operations to determine the classification, natural and optimum moisture contents, maximum dry density and overall suitability as a structural fill.

All structural fill placed beneath floor slabs and above the foundation bearing elevation should be compacted to at least 95 percent of its maximum Standard Proctor dry density (ASTM D-698). This minimum compaction requirement should be increased to 100 percent of the maximum Standard Proctor dry density for fill supporting footings, provided foundations are designed as outlined in Recommendations, Section 4.2.

It may be necessary to scarify and recompact the near surface soil prior to placement of the pavement sections. Any fill placed or recompacted within 1 ft of the base of the pavement section should also be compacted to at least 100 percent of the Standard Proctor maximum dry density. This can be reduced to 95 percent for engineered fill placed more than 1 ft below the base of the pavement section.

To achieve the recommended compaction of the structural fill, we suggest that the fill be placed and compacted in layers not exceeding eight inches in loose thickness. A Patriot soils engineer or his representative should monitor all fill placements.

## 5.4 Groundwater

Groundwater was encountered during drilling at a depth of 33.5 feet, and at the completion of drilling at a depth of 28.0 feet.

Groundwater inflow into shallow excavations above the groundwater table is expected to be adequately controlled by conventional methods such as gravity drainage and/or pumping from sumps. More significant inflow can be expected in deeper excavations below the groundwater table requiring more aggressive dewatering techniques, such as well or wellpoint systems. For groundwater to have minimal effects on the construction, foundation excavations should be constructed and poured in the same day, if possible.

## 6.0 INVESTIGATIONAL PROCEDURES

#### 6.1 Field Work

A total of 1 boring was performed at the project site on June 16, 2009 at the approximate location shown on the Boring Location Plan in Appendix A. The boring was drilled to a termination depth of 40 feet. All depths are given as feet below the existing ground surface.

The borings were advanced using  $3\frac{1}{4}$ " I.D. (inside diameter) hollow-stem augers. Samples were recovered in the undisturbed material below the bottom of the augers using the standard drive sample technique in accordance with ASTM D 1586-74. A 2" O.D. by  $1^{3}/_{8}$ " I.D. split-spoon sampler was driven a total of 18 inches with the number of blows of a 140-pound hammer falling 30 inches of penetration is the Standard Penetration Test result commonly referred to as the N-value (or blow-count). Split-spoon samples were recovered at 2.5-foot intervals, beginning at a depth of 1 foot below the existing surface grade, extending to the auger refusal depth. Water levels were monitored at each borehole location during drilling and upon completion of the boring. The borehole was backfilled with auger cuttings prior to demobilization for safety considerations.

Upon completion of the boring program, all of the samples retrieved during drilling in this sampling program were returned to *Patriot*'s soils testing laboratory where they were visually examined and classified. A laboratory generated log of each boring was prepared based upon the driller's field log, laboratory test results, and our visual classification. Test boring logs and a description of the classification system are included in Appendix A in this report. Indicated on each log are the primary strata encountered, the approximate depth of each stratum change, depth of sample, the Standard Penetration Test results, groundwater conditions, and select laboratory test data. The laboratory logs were prepared for each boring giving the appropriate sample data and the textural description and classification.

#### 6.2 Laboratory Testing

Representative samples recovered in the borings were selected for testing in the laboratory to evaluate their physical properties and engineering characteristics. Laboratory analyses included natural moisture content determinations (ASTM D 2216), an estimate of unconfined compressive strength testing by use of a calibrated hand

penetrometer. The results of all laboratory tests are shown on the boring log.

# 7.0 ILLUSTRATIONS

See Illustrations A and B on the following pages. These illustrations are presented to further visually clarify the Construction Considerations presented in Section 5.2.





# <u>APPENDIX A</u>

Site Vicinity Map

**Boring Location Map** 

Boring Logs

Boring Log Key

Unified Soils Classification (USCS)





| PATRIOT ENGINEERING<br>and Environmental Inc.<br>Indianapolis, Terre Haute, Evansville,<br>Fort Wayne, South Bend, Lafayette, |                                                                      | LOG OF BORING B-1 |                   |                                                                                                                                                                                                                                                                                                                       |                                                  |          |                                                                                                         |                    |        |          |                                              |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------|--------------------|--------|----------|----------------------------------------------|
|                                                                                                                               | Pryorsburg Cell Tower<br>3133 State Route 58<br>Pryorsburg, Kentucky |                   |                   | Client Name       : Nsoro       Driller       : H. Popp         Project Number       : 5-09-0512       Sampling       : Splitspoon         Logged By       : W. Hemp       Approximate Elevation : 409.0         Start Date       : 6/18/2009       Drill Rig       : CME-750 ATV         Drilling Method       : HSA |                                                  |          | (Page 1 of 1)<br>er : H. Popp<br>npling : Splitspoon<br>roximate Elevation : 409 0<br>Rig : CME-750 ATV |                    |        |          |                                              |
| Depth<br>in<br>Feet                                                                                                           | Water Level                                                          | uscs              | GRAPHIC           | Water Levels  During Drilling  After Completion  After 24 hours  DESCRI                                                                                                                                                                                                                                               | Samples                                          | Rec<br>% | SPT<br>Results                                                                                          | qp<br>tsf          | w<br>% | REMARKS  |                                              |
| 0-                                                                                                                            |                                                                      | CL                |                   | Topsoil (2")<br>SILTY CLAY, light browr<br>soft to stiff<br>SILTY CLAY, light browr                                                                                                                                                                                                                                   | n mottled gray, moist,<br>n mottled gray, moist, |          | 100                                                                                                     | 2/2/3<br>4/7/8     | 1.25   | 29<br>24 |                                              |
| 5-                                                                                                                            |                                                                      | CL.               |                   | stiff to very stiff                                                                                                                                                                                                                                                                                                   |                                                  | 100      | 4/7/8                                                                                                   | 2.5                | 24     |          |                                              |
| 10-                                                                                                                           |                                                                      |                   |                   | SILTY CLAY, red and br<br>very stiff                                                                                                                                                                                                                                                                                  | own, moist, stiff to                             |          | 100                                                                                                     | 5/7/9              | 1.75   | 24       |                                              |
| 15-                                                                                                                           |                                                                      | CL                |                   |                                                                                                                                                                                                                                                                                                                       |                                                  |          | 100                                                                                                     | 4/6/9              | -      | 19       |                                              |
| 20-                                                                                                                           |                                                                      | CL                |                   | SANDY CLAY, red, mois                                                                                                                                                                                                                                                                                                 | st, stiff to very stiff                          |          | 100                                                                                                     | 3/6/10             | -      | 14       |                                              |
| 25-                                                                                                                           |                                                                      | CL                |                   | SILTY CLAY, light brown<br>fine to coarse weathered                                                                                                                                                                                                                                                                   | n, moist, very stiff, w/<br>d chert pebbles      |          | 67                                                                                                      | 14/14/16           | -      | 8        |                                              |
| 30-                                                                                                                           |                                                                      |                   |                   | SILTY SAND, yellowish<br>fine-grained, very moist                                                                                                                                                                                                                                                                     | brown to white,<br>to saturated, dense           |          | 94                                                                                                      | 5/18/18            | -      | 16       | Boring caved to 29.0' upon auger<br>removal. |
| gs\KY2009\5-09-0512\B-1.bor<br>- 55                                                                                           |                                                                      | SM                |                   |                                                                                                                                                                                                                                                                                                                       |                                                  |          | 100                                                                                                     | 6/19/23<br>5/17/25 | -      | 24       |                                              |
| 40-<br>40-<br>40-<br>40-<br>40-<br>40-<br>40-<br>40-<br>40-<br>40-                                                            |                                                                      | 1                 | <u>I<u></u>4-</u> | Boring terminated at 40.                                                                                                                                                                                                                                                                                              | 0'                                               | V        |                                                                                                         |                    |        |          |                                              |

## **BORING LOG KEY**

#### UNIFIED SOIL CLASSIFICATION SYSTEM FIELD CLASSIFICATION SYSTEM FOR SOIL EXPLORATION

#### NON COHESIVE SOILS

(Silt, Sand, Gravel and Combinations)

|                     | Density                                    | Grain Size Terminology |                      |                        |  |  |  |  |
|---------------------|--------------------------------------------|------------------------|----------------------|------------------------|--|--|--|--|
| Very Loose<br>Loose | -5 blows/ft. or less<br>-6 to 10 blows/ft. | Soil Fraction          | Particle Size        | US Standard Sieve Size |  |  |  |  |
| Medium Dense        | -11 to 30 blows/ft.                        | Boulders               | Larger than 12"      | Larger than 12"        |  |  |  |  |
| Dense               | -31 to 50 blows/ft.                        | Cobbles                | 3" to12"             | 3" to 12"              |  |  |  |  |
| Very Dense          | -51 blows/ft. or more                      | Gravel: Coarse         | ³₄" to 3"            | ³∕₄" to 3"             |  |  |  |  |
| •                   |                                            | Small                  | 4.76mm to ¾"         | #4 to ¾"               |  |  |  |  |
|                     |                                            | Sand: Coarse           | 2.00mm to 4.76mm     | #10 to #4              |  |  |  |  |
|                     |                                            | Medium                 | 0.42mm to 2.00mm     | #40 to #10             |  |  |  |  |
|                     |                                            | Fine                   | 0.074mm to 0.42mm    | #200 to #40            |  |  |  |  |
|                     |                                            | Silt                   | 0.005mm to 0.074 mm  | Smaller than #200      |  |  |  |  |
|                     |                                            | Clay                   | Smaller than 0.005mm | Smaller than #200      |  |  |  |  |

#### **RELATIVE PROPORTIONS FOR SOILS**

| Descriptive Term | Percent |
|------------------|---------|
| Trace            | 1 - 10  |
| Little           | 11 - 20 |
| Some             | 21 - 35 |
| And              | 36 - 50 |

#### **COHESIVE SOILS**

| (Clay, Silt and | Combinations) |  |
|-----------------|---------------|--|
|-----------------|---------------|--|

| Consistency  | Field Identification                       | Unconfined Compressive<br>Strength (tons/sq. ft.) |  |  |  |
|--------------|--------------------------------------------|---------------------------------------------------|--|--|--|
| Very Soft    | Thumb will penetrate soil more than 1 inch | Less than 0.25                                    |  |  |  |
| Soft         | Thumb will penetrate soil about 1 inch     | 0.25 - < 0.5                                      |  |  |  |
| Medium Stiff | Thumb will penetrate soil about 1/2 inch   | 0.5 - < 1.0                                       |  |  |  |
| Stiff        | Thumb will indent soil about 1/4 inch      | 1.0 - < 2.0                                       |  |  |  |
| Very Stiff   | Readily indented by thumbnail              | 2.0 - < 4.0                                       |  |  |  |
| Hard         | Indented with difficulty by thumbnail      | Over 4.0                                          |  |  |  |

Classification on logs are made by visual inspection.

**Standard Penetration Test** - Driving a 2.0" O.D.,  $1^{3/8}$  I.D., sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30.0 inches. It is customary for **Patriot** to drive the spoon 6.0 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and making the tests are recorded for each 6.0 inches of penetration on the drill log (Example - 6/8/9). The standard penetration test results can be obtained by adding the last two figures (i.e. 8 + 9 = 17 blows/ft.).

**<u>Strata Changes</u>** - In the column "Soil Descriptions" on the drill log the horizontal lines represent strata changes. A solid line (-----) represents an actually observed change, a dashed line (-----) represents an estimated change.

<u>Groundwater</u> observations were made at the times indicated. Porosity of soil strata, weather conditions, site topography, etc., may cause changes in the water levels indicated on the logs.

*Groundwater symbols*: ▼-observed groundwater elevation, encountered during drilling; ∇-observed groundwater elevation upon completion of boring.



# **Unified Soil Classification**

| Major Divisions                                                             |                                                                     | Grou                                      | p Symbol | Typical Names                                 | Classifi                                                                                                | cation Criteria                           | for Coarse                                                                                                                            | e-Grained Soils                        |                                                                                                                                            |  |  |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------|----------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|                                                                             | arse<br>No. 4                                                       | gravels<br>or no<br>les)                  |          | GW                                            | Well-graded gravels, gravel-sand mixtures,<br>little or no fines                                        | C <sub>u</sub> ≥4<br>1 ≤ C <sub>c</sub> ≤ | 3 C <sub>U</sub> =                                                                                                                    | D <sub>60</sub>                        | $C_{C} = \frac{D_{30}^{2}}{D_{10} D_{60}}$                                                                                                 |  |  |
| Coarse-grained soils<br>(more than half of material is larger than No. 200) | ivels<br>nalf of co<br>ger than<br>size)                            | Clean<br>(little<br>fin                   |          | GP                                            | Poorly graded gravels, gravel-sand mixtures,<br>little or no fines                                      | Not                                       | meeting all grad<br>GW (C <sub>U</sub> < 4                                                                                            | fation requ<br>or 1 > C <sub>C</sub> : | irements for<br>> 3)                                                                                                                       |  |  |
|                                                                             | Gra<br>ore than I<br>ion is lar<br>sieve                            | ls with<br>es<br>cciable<br>int of<br>es) | GM       | <u>d</u><br>u                                 | Silty gravels, gravel-sand-silt mixtures                                                                | Atterberg<br>A line                       | limits below<br>or P <sub>I</sub> < 4                                                                                                 | Ab                                     | ove A line with $4 < P_1 < 7$                                                                                                              |  |  |
|                                                                             | (mo                                                                 | Grave<br>fin<br>(appre<br>amou<br>fine    |          | GC                                            | Clayey gravels, gravel-sand-clay mixtures                                                               | Atterberg<br>A line                       | limits above<br>or $P_1 > 7$                                                                                                          | requ                                   | iring use of dual symbols                                                                                                                  |  |  |
|                                                                             | arse<br>No. 4                                                       | sands<br>or no<br>es)                     |          | SW                                            | Well-graded sands, gravelly sands, little or no<br>fines                                                | C <sub>U</sub> ≥6<br>1≤C <sub>C</sub> ≤   | 3 C <sub>U</sub> =                                                                                                                    | D <sub>50</sub><br>D <sub>10</sub>     | $C_{c} = \frac{(D_{30})^{2}}{D_{10} D_{60}}$                                                                                               |  |  |
|                                                                             | Sands<br>re than half of coa<br>on is smaller than l<br>sieve size) | Clean<br>(little<br>fin                   |          | SP                                            | Poorly graded sands, gravelly sands, little or no fines                                                 | Not                                       | meeting all grad<br>SW (C <sub>U</sub> < 6                                                                                            | lation requ<br>or 1 > C <sub>c</sub> : | irements for<br>> 3)                                                                                                                       |  |  |
|                                                                             |                                                                     | s with<br>es<br>ciable<br>int of<br>ss)   | SM       | <u>d</u><br>u                                 | Silty sands, sand-silt mixtures                                                                         | Atterberg lim<br>line or                  | limits below A<br>or P <sub>I</sub> < 4                                                                                               | Limits                                 | Limits plotting in hatched zone with $4 \le P_1 \le 7$                                                                                     |  |  |
|                                                                             | (mc                                                                 | Sands<br>fine<br>(appre<br>amou<br>fine   |          | SC                                            | Clayey sands, sand-clay mixtures                                                                        | Atterberg<br>A line                       | limits above<br>with P <sub>I</sub> > 7                                                                                               | requ                                   | iring use of dual<br>symbols                                                                                                               |  |  |
| 200)                                                                        | s                                                                   | Silt and clays<br>(liquid limit <50)      |          | , ML                                          |                                                                                                         | ML                                        | Inorganic silts and very fine sands, rock flour,<br>silty or clayey fine sands, or clayey silts with<br>slight plasticity             | 1. Deter<br>grain<br>2. Deper          | <ol> <li>Determine percentages of sand and gravel<br/>grain size curve.</li> <li>Depending on percentages of fines (fraction sn</li> </ol> |  |  |
| Fine-grained soils<br>than half of material is smaller than No. 2           | silt and cla                                                        |                                           |          | CL                                            | Inorganic clays of low to medium plasticity,<br>gravelly clays, sandy clays, silty clays, lean<br>clays | than<br>classi<br>Less<br>More            | than 200 sieve size), coarse-grained soils<br>classified as follows:<br>Less than 5% - GW, GP, SW, SP<br>More than 12% - GM GC, SM SC |                                        |                                                                                                                                            |  |  |
|                                                                             |                                                                     |                                           |          | OL                                            | Organic silts and organic silty clays of low<br>plasticity                                              | 5-12%                                     | - Borderline ca                                                                                                                       | ises requiri                           | ng dual symbols                                                                                                                            |  |  |
|                                                                             | lays                                                                | lays<br>>50)                              |          | МН                                            | Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts                     |                                           |                                                                                                                                       |                                        |                                                                                                                                            |  |  |
|                                                                             | s and c                                                             | СН                                        |          | Inorganic clays or high plasticity, fat clays |                                                                                                         |                                           |                                                                                                                                       |                                        |                                                                                                                                            |  |  |
|                                                                             | i                                                                   | Clique                                    |          | ОН                                            | Organic clays of medium to high plasticity,<br>organic silts                                            |                                           |                                                                                                                                       |                                        |                                                                                                                                            |  |  |
| (more                                                                       | Highly<br>organic<br>soils                                          |                                           |          | РТ                                            | Peat and other highly organic soils                                                                     |                                           |                                                                                                                                       |                                        |                                                                                                                                            |  |  |



# <u>APPENDIX B</u>

**General Qualifications** 

and

Standard Clause for Unanticipated Subsurface Conditions

## GENERAL QUALIFICATIONS of Patriot Engineering's Geotechnical Engineering Investigation

This report has been prepared at the request of our client for his use on this project. Our professional services have been performed, findings obtained, and recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties either expressed or implied.

The scope of our services did not include any environmental assessment or investigation for the presence or absence of wetlands, hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in this report or on the test borings logs regarding vegetation types, odors or staining of soils, or other unusual conditions observed are strictly for the information of our client and the owner.

This report may not contain sufficient information for purposes of other parties or other uses. This company is not responsible for the independent conclusions, opinions or recommendations made by others based on the field and laboratory data presented in this report. Should there be any significant differences in structural arrangement, loading or location of the structure, our analysis should be reviewed.

The recommendations provided herein were developed from the information obtained in the test borings, which depict subsurface conditions only at specific locations. The analysis, conclusions, and recommendations contained in our report are based on site conditions as they existed at the time of our exploration. Subsurface conditions at other locations may differ from those occurring at the specific drill sites. The nature and extent of variations between borings may not become evident until the time of construction. If, after performing on-site observations during construction and noting the characteristics of any variation, substantially different subsurface conditions from those encountered during our explorations are observed or appear to be present beneath excavations we must be advised promptly so that we can review these conditions and reconsider our recommendations where necessary.

If there is a substantial lapse of time between the submission of our report and the start of work at the site, or if conditions have changed due to natural causes or construction operations at or adjacent to the site, we urge that our report be reviewed to determine the applicability of the conclusions and recommendations considering the changed conditions and time lapse.

We urge that Patriot be retained to review those portions of the plans and specifications that pertain to earthwork and foundations to determine whether they are consistent with our recommendations. In addition, we are available to observe construction, particularly the compaction of structural backfill and preparation of the foundations, and such other field observations as may be necessary.

In order to fairly consider changed or unexpected conditions that might arise during construction, we recommend the following verbiage (Standard Clause for Unanticipated Subsurface Conditions) be included in the project contract.

#### STANDARD CLAUSE FOR UNANTICIPATED SUBSURFACE CONDITIONS

"The owner has had a subsurface exploration performed by a soils consultant, the results of which are contained in the consultant's report. The consultant's report presents his conclusions on the subsurface conditions based on his interpretation of the data obtained in the exploration. The contractor acknowledges that he has reviewed the consultant's report and any addenda thereto, and that his bid for earthwork operations is based on the subsurface conditions as described in that report. It is recognized that a subsurface exploration may not disclose all conditions as they actually exist and further, conditions may change, particularly groundwater conditions, between the time of a subsurface exploration and the time of earthwork operations. In recognition of these facts, this clause is entered in the contract to provide a means of equitable additional compensation for the contractor if adverse unanticipated conditions are encountered and to provide a means of rebate to the owner if the conditions are more favorable than anticipated.

At any time during construction operations that the contractor encounters conditions that are different than those anticipated by the soils consultant's report, he shall immediately (within 24 hours) bring this fact to the owner's attention. If the owner's representative on the construction site observes subsurface conditions which are different than those anticipated by the consultant's report, he shall immediately (within 24 hours) bring this fact to the contractor's attention. Once a fact of unanticipated conditions has been brought to the attention of either the owner or the contractor, and the consultant has concurred, immediate negotiations will be undertaken between the owner and the contractor to arrive at a change in contract price for additional work or reduction in work because of the unanticipated conditions. The contract agrees that the following unit prices would apply for additional or reduced work under the contract. For changed conditions for which unit prices are not provided, the additional work shall be paid for on a time and materials basis."

Another example of a changed conditions clause can be found in paper No. 4035 by Robert F. Borg, published in <u>ASCE Construction Division Journal</u>, No. CO2, September 1964, page 37.

Exhibit F



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

## Competing Utilities, Corporations or Persons

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



Exhibit G



Federal Aviation Administration Air Traffic Airspace Branch, ASW-520 2601 Meacham Blvd. Fort Worth, TX 76137-0520 Aeronautical Study No. 2009-ASO-3627-OE

Issued Date: 08/07/2009

AT&T Mobility - Dana Irvin Muayyad Mustafa 5601 Legacy Dr., MS: A3 Plano, TX 75024

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

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

| Structure: | Antenna Tower Pryorsburg             |
|------------|--------------------------------------|
| Location:  | Mayfiled, KY                         |
| Latitude:  | 36-40-56.30N NAD 83                  |
| Longitude: | 88-44-18.57W                         |
| Heights:   | 280 feet above ground level (AGL)    |
| -          | 712 feet above mean sea level (AMSL) |

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

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

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

At least 10 days prior to start of construction (7460-2, Part I)

\_\_\_\_\_\_ Within 5 days after the construction reaches its greatest height (7460-2, Part II)

While the structure does not constitute a hazard to air navigation, it would be located within or near a military training area and/or route.

This determination expires on 02/07/2011 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.
NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

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

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

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

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

If we can be of further assistance, please contact our office at (847) 294 8084. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2009-ASO-3627-OE.

(DNE)

**Signature Control No: 638821-117603135** Carole Bernacchi Technician

Attachment(s) Frequency Data

### Frequency Data for ASN 2009-ASO-3627-OE

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



### KENTUCKY AIRPORT ZONING COMMISSION

STEVEN BESHEAR Governor 90 Airport Road, Bldg 400 FRANKFORT, KY www.transportation.ky.gov/aviation 502 564-4480

August 13, 2009

APPROVAL OF APPLICATION

APPLICANT: A T & T MOBILITY LLC MS LISA GLASS 5310 MARYLAND WAY BRENTWOOD, TN 37027

SUBJECT: AS-042-M25-2009-135

STRUCTURE:Antenna TowerLOCATION:Pryorsburg, KYCOORDINATES:36° 40' 56.3" N / 88° 44' 18.57" WHEIGHT:270' AGL/702' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 270'AGL/ 702'AMSL Antenna Tower near Pryorsburg, KY 36° 40' 56.3" N / 88° 44' 18.57" W.

This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit.

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

M-Dual Obstruction Lighting is required.

John Houlihan

Administrator



An Equal Opportunity Employer M/F/D

Exhibit H

### ULS License

### Cellular License - KNKN830 - NEW CINGULAR WIRELESS PCS, LLC

| StatusActiveAuth TypeRegularMarketMarketCMA443 - Kentucky 1 - FultonChannel BlockASubmarket0Phase2DatesGrant08/21/2001Expiration10/01/2011Grant02/08/2007CancellationFire Year BuilterJacobianStatemarkControl PointsImage: StatemarkImage: Statemark11650 Lyndon Farms Court, LOUISVUELF, KY<br>P: (502) 332-4700Statemark                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| Market           Market         CMA443 - Kentucky 1 - Fulton         Channel Block         A           Submarket         0         Phase         2           Dates         J         J         J           Grant         08/21/2001         Expiration         10/01/2011           Effective         02/08/2007         Cancellation         J           Five Year Builder         J         J         J           Control Points         J         J         J           I         1650 Lyndon Farms Court, LOUISVILLE, KY<br>P: (502) 332-4700         J         J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |
| Market       CMA443 - Kentucky 1 - Fulton       Channel Block       A         Submarket       0       Phase       2         Dates       Jacobian       Submarket       Jacobian         Grant       08/21/2001       Expiration       10/01/2011         Effective       02/08/2007       Cancellation       Submarket         Five Year Builder       Dates       Submarket       Submarket         02/11/1997       Submarket       Submarket       Submarket         1       1650 Lyndon Farms Court, LOUISVILLE, KY       Submarket       Submarket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |
| Submarket         0         Phase         2           Dates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |
| Dates           Grant         08/21/2001         Expiration         10/01/2011           Effective         02/08/2007         Cancellation            Five Year Builtow         Date         Event         Event           02/11/1997         02/01/00         Second Sec                  |  |  |  |  |  |
| Grant         08/21/2001         Expiration         10/01/2011           Effective         02/08/2007         Cancellation            Five Year Builder         Date         Event         Event         Event           02/11/1997         02/01/1000         Image: Second |  |  |  |  |  |
| Effective         02/08/2007         Cancellation           Five Year Buildow Date           02/11/1997         Control Points           Control Points           1         1650 Lyndon Farms Court, LOUISVILLE, KY           P: (502)332-4700         P: (502)332-4700                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |
| Five Year Buildout Date         02/11/1997         Control Points         1       1650 Lyndon Farms Court, LOUISVILLE, KY         P: (502)332-4700                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |  |
| 02/11/1997 Control Points 1 1650 Lyndon Farms Court, LOUISVILLE, KY P: (502)332-4700                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |
| Control Points 1 1650 Lyndon Farms Court, LOUISVILLE, KY P: (502)332-4700                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |
| 1 1650 Lyndon Farms Court, LOUISVILLE, KY<br>P: (502)332-4700                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |  |
| Licensee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |  |
| FRN 0003291192 Type Limited Liability Company                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |
| Licensee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |  |
| NEW CINGULAR WIRELESS PCS, LLCP:(469)229-74225601 LEGACY DRIVE, MS: A-3F:(469)229-7297PLANO, TX 75024E:KELLYE.E.ABERNATHY@CINGULAR.COMATTN KELLYE E. ABERNATHYF:(469)229-7297                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |
| Contact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |
| AT&T MOBILITY LLC P:(202)255-1679<br>DAVID C JATLOW F:(561)279-2097<br>11760 US HIGHWAY 1 E:DAVID.JATLOW@CINGULAR.COM<br>NORTH PALM BEACH, FL 33408                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |
| Ownership and Qualifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |
| Radio Service Type Mobile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |
| Regulatory Status Common Carrier Interconnected Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |
| Alien Ownership<br>The Applicant answered "No" to each of the Alien Ownership questions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |  |
| Basic Qualifications<br>The Applicant answered "No" to each of the Basic Qualification questions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |
| Demographics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |
| Race                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |
| Ethnicity Gender                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |

Exhibit I

| Market:            | SOUTH/TN-KY |
|--------------------|-------------|
| Cell Site Number:  | 33960157    |
| Cell Site Name:    | Pryorsburg  |
| Fixed Asset Number | : 10132775  |

### **OPTION AND STRUCTURE 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 Harold E. and Belinda J. Green and Scott D. Green, as individuals, having a mailing address of 3133 State Route 58, Mayfield, KY 42066 (hereinafter referred to as "Landlord") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 12555 Cingular Way, Alpharetta, GA 30004 (hereinafter referred to as "Tenant").

### BACKGROUND

Landlord owns or controls that certain plot, parcel or tract of land, improved with a structure, together with all rights and privileges arising in connection therewith, located on Highway 58, in the County of Graves, State of Kentucky (collectively, the "Property"). Tenant desires to use a portion of the Property in connection with its federally licensed communications business. Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

### 1. OPTION TO LEASE.

(a) Landlord grants to Tenant an option (the "**Option**") to lease a portion of the Property consisting of: (i) approximately ten thousand (10,000) square feet of ground space for the placement of Tenant's radio cabinets plus the airspace above such those spaces; and

(ii) space for any structural steel or other improvements to support Tenant's equipment (collectively, the "Equipment Space"); and

(iii) that certain space on the building's rooftop and/or façades, as generally depicted on **Exhibit 1** annexed hereto and made a part hereof, where Tenant shall have the right to install its antennas (collectively, the "Antenna Space"); and

(iv) those certain areas where Tenant's conduits, wires, cables, cable trays and other necessary connections are located between the Equipment Space and the Antenna Space, and between the Equipment Space and the electric power, telephone, and fuel sources for the Property (hereinafter collectively referred to as "Connections"). Landlord agrees that Tenant shall have the right to install Connections between Tenant's equipment in the Equipment Space and Antenna Space; and between Tenant's equipment in the Equipment Space and the electric power, telephone, and fuel sources for the Property, and any other improvements. Landlord further agrees that Tenant shall have the non-exclusive right for ingress and egress to the Premises (as hereinafter defined), seven (7) days a week, twenty-four (24) hours a day, on foot or motor vehicle, including trucks, over such portion of the Premises as may be designated by the Landlord extending from the nearest public right-of-way to the Premises, together with the right to install, replace and maintain utility wires, poles, cables, conduits, pipes and other necessary connections over or along any right-of-way extending from the aforementioned public rightof-way to the Premises. Notwithstanding the foregoing, Tenant, to the extent feasible, shall locate all wires, conduits and cables on existing poles extending from the roadway into Landlord's Property. The Equipment Space, Antenna Space, Connections, Access, and Right-of-Way are hereinafter collectively referred to as the "Premises."

> 8-10-07 Option Structure Lesse 2007

During the Option period and any extension thereof, and during the term of this Agreement. Tenant (b) 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 Option will be for an initial term of one (1) year commencing on the Effective Date (the "Initial Option Term")

(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 communication fixtures and related equipment, cables, accessories and improvements, which may include a suitable support structure, associated antennas, I beams, 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 Surrounding Property, 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 the 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  $(4^{th})$  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  $(4^{th})$  extended term, then upon the expiration of the fourth  $(4^{th})$  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  $(4^{th})$  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 ("**Rent**"), at the address set forth above, on or before the fifth (5") day of each 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 and hereafter intended by Tenant or if Tenant determines in its sole discretion that the cost of obtaining or retaining the same is commercially unreasonable; or

(c) by Tenant upon written notice to Landlord for any 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 or no 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. INTERFERENCE.

(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 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 and solely owns the structure; (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.

Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all (b)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 or matters as may now or hereafter be in effect, or (ii) 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.

In the event Tenant becomes aware of any hazardous materials on the Property, or any (d)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.

12. ACCESS. At all times throughout the Term of this Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access 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.

**REMOVAL/RESTORATION.** All portions of the Communication Facility brought onto the Property 13. 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

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will not be responsible for the replacement of any trees, shrubs or other vegetation, nor will Tenant be required to remove from the Premises or the Property any structural steel 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 by 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. Notice will be addressed to the parties as follows:

- If to Tenant:
   New Cingular Wireless PCS, LLC

   Attn: Network Real Estate Administration

   Re:
   Cell Site #: 339G0157; Cell Site Name: Pryorsburg

   Fixed Asset No:
   10132775

   12555 Cingular Way

   Alpharetta, GA 30004
- With a copy to: New Cingular Wireless PCS, LLC Attn.: Legal Department Re: Cell Site #: 339G0157; Cell Site Name: Pryorsburg Fixed Asset No: 10132775 1025 Lenox Park Blvd., 5<sup>th</sup> Floor 5<sup>th</sup> Floor Atlanta, GA 30319

If to Landlord: <u>Mr. & Mrs. Harold Green/ Scott Green</u> 3133 State Rte 58 <u>Mayfield, KY 42066</u>

Either party hereto may change the place for the giving of notice to it by thirty (30) days 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
  - a. Old deed to Property
  - b. New deed to Property
  - c. Bill of Sale or Transfer
  - d. Copy of current Tax Bill
  - e. New W-9

(i)

- f. New Payment Direction Form
- g. Full contact information for new Landlord including all phone numbers

18. <u>CONDEMNATION.</u> 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.

19. <u>CASUALTY.</u> Landlord will provide notice to Tenant of any casualty affecting the Property within fortyeight (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.

(a) If Landlord, at any time during the Term of this Agreement, decides to sell, subdivide or rezone 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 Paragraph 22, 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.

(c) 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.

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(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 an 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]

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

"LANDLORD"

By: Have She Print Name: Har of I Green Date: 1-00-09

"LANDLORD"

By: Flinda & Allin Print Name: Bolinda J. GREEN Date: \_\_\_\_\_6 - 6 6 6 9

"LANDLORD" Her By: Print Name: Scott DGIEEN Date: wig an

"TENANT"

New Cingular Wireless PCS, LLC, a Delaware limited liability company

By: AT&T Mobility Corporation Its: Manager By:

Print Name: <u>Daniel Toth</u> Its: <u>Manager of Real Estate and Construction</u> Date: <u>3/11/89</u>

[ACKNOWLEDGMENTS APPEAR ON THE NEXT PAGE]

STATE OF Kentucky

On this (l) day of (m), 20, 0, before me personally appeared Harold and Belinda Green and Scott Green, 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.



[NOTARIAL SEAL]

<u>TENANT</u>

STATE OF KILLET TENNESSEE COUNTY OF STATES MILLIAMSON

Before me, ERICA L. CLANTON of the state and county mentioned, personally appeared <u>Daniel Toth</u>, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged such person to be the Manager of Real Estate and Construction of New Cingular Wireless PCS, LLC, a Delaware limited liability company, by AT&T Mobility Corporation, its Manager, the within named bargainor, and that in such capacity, he executed the foregoing Option and Lease Agreement for the purposes therein contained, by personally signing the name of New Cingular Wireless PCS, LLC.

13

Witness my hand and seal, this the 11th day of AUG, 20 09. L. Clark NOTARY PUBLIC MAY B My commission expires: MAY 8, 2012



" Commission Expires MAY 8, 2012

### EXHIBIT 1

### **DESCRIPTION OF PREMISES**

Page 1 of 1

to the Agreement dated <u>AU6UST (1</u>, 2009, by and between Harold E. and Belinda J. Green and Scott D. Green, individuals, as Landlord, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, as Tenant.

The Premises are described and/or depicted as follows:

See attached Survey

Notes:

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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 1 page 2 of 2





Directions to Site: From Mayfield at the intersection of State Route 80 (West Broadway Street) and U. S. 45 (South 8<sup>th</sup> Street), proceed South on U.S. 45 approximately 7.0 miles to the junction of State Route 58 and proceed West on State Route 58 for approximately 0.5 miles to site on left.

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

Exhibit J



|     |                                                                                                                                                               | Soro Soro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| À   | MAP 041.00.00, LOT 030.00<br>GREEN, HAROLD E & BELINDA<br>31.33 ST. RT. 58<br>MAYFIELD, KY 42066<br>DEED BOOK 413, PAGE 666<br>NO ZONING                      | s Just good t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| ₿   | MAP 041.00.00, LOT 034.00<br>PAYNE, THOMAS W.<br>796 STACKS LN<br>WINGO, KY 42088<br>DEED BOOK 372, PAGE 553<br>NO ZONING                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| ©   | MAP 041.00.00, LOT 034.00<br>PAYNE, THOMAS W.<br>796 STACKS LN.<br>WINGO, KY 42088<br>DEED BOOK 372, PAGE 553<br>NO ZONING                                    | Ind Company<br>Neal Company<br>Neal Company<br>and Company<br>and Company<br>and Consulting Engine<br>stat.2215 cuttenden Dire<br>wile, A2217<br>cuttenden Dire<br>stat.2215 cuttenden Dire<br>stat.2215 cuttenden Dire<br>stat.2215 cuttenden Dire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| ٥   | MAP 041.00.00, LOT 035.00<br>BATTS FARMS LLC &<br>BOSTIC, JOHN & LARK<br>6396 ST RT. 1529 E<br>WATER VALLEY, KY 42085<br>DEED BOOK 387, PAGE 256<br>NO ZONING | SILE NAWBEE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Ð   | MAP 058.00.00, LOT 119.00<br>BOSTIC, JOHN & LARK<br>6396 ST RT 1529 E<br>WATERVALLEY, KY 42085<br>DEED BDOK 452, PAGE 307<br>NO ZONING                        | 339G0157<br>SITE NAME:<br>PRYORSBURG<br>SITE ADDRESS:<br>SR-58                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Ē   | MAP 042.00.00, LOT 095.00<br>GREEN, HAROLD E & BELINDA<br>3133 ST. RT 58<br>MAYFIELD, KY 42066<br>DEED BOOK 278, PAGE 92<br>NO ZONING                         | MAYFIELD, KY 42066<br>PROPOSED LEASE AREA:<br>10,000 sq. ft.<br>PROPERTY OWNER:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 6   | MAP 042.00.00, LOT 095.00<br>GREEN, HAROLD E & BELINDA<br>3133 ST. RT. 58<br>MAYTFIED, KY 42066<br>DEED BOOK 278, PAGE 92<br>NO ZONING                        | HAROLD E. & BELINDA J. GREEN<br>(1/2 INTEREST)<br>SCOTT D. GREEN<br>(1/2 INTEREST)<br>3133 SR-58<br>MAYFIELD, KY 42066                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| (H) | MAP 042.00.00, L0T 099.00<br>GREEN, HAROLD E & BELINDA<br>3133 ST. RT 58<br>MAYFIELD, KY 42066<br>DEED BOOK 278, PAGE 92<br>NO ZONING                         | TAX MAP NUMBER:<br>041.00.00<br>PARCEL NUMBER:<br>030.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0   | MAP 041.00.00, LOT 027.00<br>HESTER, WILLIAM L & TAMMIE<br>1488 FOLKS SCHOOL RD.<br>MAYFIELD, KY 42066<br>DEED BOOK 435, PAGE 149<br>MO 70MING                | SOURCE OF TITLE:<br>DEED BOOK 413, PAGE 666<br>DWG BY: CHKD BY: DATE:<br>IIII DESTINATION OF THE DESTINOTION OF TH |
| J   | MAP 041.00.00, LOT 028.00<br>STONE, GENE & BRENDA<br>791 ST. RT. 58<br>MAYFIELD, KY 42066<br>DEED BOOK 384, PAGE 788                                          | FSTAN PROJECT NO.:<br>09-5976<br>SHEET_1_OF 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|     | NO ZONING                                                                                                                                                     | REVISIONS:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|     |                                                                                                                                                               | C1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

TODD R. BRIGGS

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

### Notice of Proposed Construction Wireless Telecommunications Facility

William L. & Tammie Hester 1488 Folks School Rd Mayfield, KY 42066

### Via Certified Mail Return Receipt Requested

Dear Landowner:

New Cingular Wireless PCS, LLC is applying to the Kentucky Public Service Commission (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new wireless telecommunications facility located near the intersection of State Route 58 and U.S. 45, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 250 foot self-support tower, plus related ground facilities.

This notice is being sent to you because the Graves County Property Valuation Administrator's records indicate that you own property that is within a 500' radius of the proposed tower site OR 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 2009-00319 in any correspondence.

Sincerely,

Juli 1 Sy

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

John & Lark Bostic 6396 State Route 1529 E. Water Valley, KY 42085

### 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 near the intersection of State Route 58 and U.S. 45, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 250 foot self-support tower, plus related ground facilities.

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Sincerely,

Mild' 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

Batts Farms LLC & John & Lark Bostic 6396 State Route 1529 E. Water Valley, KY 42085

### 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 near the intersection of State Route 58 and U.S. 45, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 250 foot self-support tower, plus related ground facilities.

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Sincerely,

Man 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

Thomas W. Payne 796 Stacks Lane Wingo, KY 42088

### 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 near the intersection of State Route 58 and U.S. 45, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 250 foot self-support tower, plus related ground facilities.

This notice is being sent to you because the Graves County Property Valuation Administrator's records indicate that you own property that is within a 500' radius of the proposed tower site OR 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 2009-00319 in any correspondence.

Sincerely,

Ald By

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

TODD R. BRIGGS

TELEPHONE (502) 254-9756

FACSIMILE (502) 254-5717

### Notice of Proposed Construction Wireless Telecommunications Facility

Gene & Brenda Stone 791 State Route 58 Mayfield, KY 42066

### Via Certified Mail Return Receipt Requested

Dear Landowner:

New Cingular Wireless PCS, LLC is applying to the Kentucky Public Service Commission (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new wireless telecommunications facility located near the intersection of State Route 58 and U.S. 45, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 250 foot self-support tower, plus related ground facilities.

This notice is being sent to you because the Graves County Property Valuation Administrator's records indicate that you own property that is within a 500' radius of the proposed tower site OR 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 2009-00319 in any correspondence.

Sincerely,

Marsy

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

Exhibit K

### 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 Tony Smith Graves County Judge Executive 101 East South Street Mayfield, KY 42066

### RE: Notice of Proposal to Construct Wireless Telecommunications Facility Kentucky Public Service Commission--Case No. 2009-00319

Dear Judge Smith:

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 near the intersection of State Route 58 and U.S. 45, Mayfield, Kentucky 42066. A map showing the location is attached. The proposed facility will include a 250 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 <u>2009-00319</u> in any correspondence.

Sincerely,

Mary

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

Exhibit L

# PUBLIC NOTICE

New Cingular Wireless PCS, LLC proposes to construct a telecommunications

### 

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 #2009-00319

<sup>10</sup> Jour correspondence.

## PUBLIC NOTICE

New Cingular Wireless PCS, LLC proposes to construct a telecommunications

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

Briggs Law Office, PSC 17300 Polo Fields Lane 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 #2009-00319 in your correspondence.

Exhibit M



Pryorsburg Search Area

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

July 9, 2009

To Whom It May Concern:

Dear Sir or Madam:

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

Sait 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

July 9, 2009

To Whom It May Concern:

Dear Sir or Madam:

This letter is to state the need of the proposed AT&T site called Pryorsburg, to be located in Graves County, KY. The Pryorsburg site is necessary to improve coverage and eliminate interference in southwestern Graves County. This site will improve the coverage and reduce interference on US Hwy 45, the Purchase Pkwy, SR 58, and the surrounding area. Our closest existing site to this area is over 5.5 miles away; thus, there is currently no dominant server in this area. This lack of a dominant server causes many quality issues for the customers. Currently customers in this area experience high dropped calls and may experience poor call quality or areas of no service. With the addition of this site, the customers in this area of Graves County will experience improved reliability, better in-building coverage, and improved access to emergency 911 services.

Sh A La -

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

July 9, 2009

To Whom It May Concern:

Dear Sir or Madam:

This letter is to serve as documentation that the proposed AT&T site called Pryorsburg, to be located in Graves County, KY at Latitude 36-40-56.3 North, Longitude 088-44-18.57 West, has been designed, and will be built and operated in accordance with all applicable FCC and FAA regulations.

Sh-ALe-

Sherri A Lewis RF Design Engineer