smartlink

Via Hand Delivery

October 23, 2012

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re:	**Tower Sharing Application**
Property Address:	**15 Orchard Park Road, Madison, CT 06443 (the "Property")**
Applicant:	**New Cingular Wireless PCS, LLC d/b/a AT&T ("AT&T")**

Dear Ms. Bachman:

On behalf of AT&T, enclosed in connection with the shared use of a tower located on the Property, please find an original and fifteen (15) copies of a tower sharing application package along with a check in the amount of six hundred and twenty five ($625.00) dollars.

Please date stamp the copy of this letter and return it to the courier delivering this application package. If you have any questions, please contact me.

Sincerely,

Adam F. Braillard

Enclosures

Cc
Honorable Fillmore McPherson: First Selectman, Town of Madison, CT
David Milano, Milano Development Corp: Property Owner
w/enclosures:

33 Boston Post Road West, Marlborough, Massachusetts 01752
p: 508.954.7702 • adam.braillard@smartlinkllc.com
www.smartlinkllc.com

APPLICATION TO THE CONNECTICUT SITING COUNCIL
FOR AN ORDER TO APPROVE THE SHARED USE OF AN EXISTING TOWER
PURSUANT TO CONNECTICUT GENERAL STATUTE §16-50aa

APPLICANT

New Cingular Wireless PCS, LLC, d/b/a AT&T
500 Enterprise Drive, Suite 3A
Rocky Hill, CT 06067

TOWER/PROPERTY ADDRESS

15 Orchard Park Road
Madison Connecticut 06443

PREPARED BY: Adam F. Braillard
Regional Land Use Manager
Smartlink, LLC
33 Boston Post Road West
Marlborough Massachusetts 01752
508-954-7702

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APPLICANT

New Cingular Wireless PCS, LLC, d/b/a AT&T
500 Enterprise Drive, Suite 3A
Rocky Hill, CT 06067

TOWER/PROPERTY ADDRESS

15 Orchard Park Road
Madison Connecticut 06443

TAB 1

smartlink

October 23, 2013

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re:	**Request for an Order to Approve the Shared Use of an Existing Tower**
Property Address:	**15 Orchard Park Road, Madison, CT 06443 (the "Property")**
Applicant:	**New Cingular Wireless PCS, LLC d/b/a AT&T ("AT&T")**

Dear Ms. Bachman:

This firm represents AT&T in connection with an application pursuant to Connecticut General Statute §16-50aa, as amended (the "Statute"), requesting the finding from the Connecticut Siting Council (the "Council") that the shared use of the tower and facility located on the Property (the "Facility") is technically, legally, economically and environmentally feasible, will meet public safety concerns, will avoid the unnecessary proliferation of towers and is in the public interest. AT&T further requests an order from the Council approving the shared use of the Facility.

I. The Facility

The Facility is owned by Florida Tower Partners ("FTP") and consists of a 100' monopole style tower (the "Tower") located on the Property, which is located at latitude 40° 16' 59.09" N and longitude 72° 37' 22.93" W. The Tower is currently shared by T-Mobile at a height of 100'. The Facility also consists of a 44'-6" x 31'-6" fenced compound at the base of the Tower with T-Mobile's radio equipment therein.

II. The Proposal

AT&T proposes to install a total of twelve (12) panel antennas (4 per sector) and fifteen (15) remote radio head ("RRHs") on the tower (see attached plans). The antennas and RRHs will be mounted on the Tower at a centerline of 90'. Further, AT&T proposes to install an 11'.5" x 16' equipment shelter and a generator at the base of the Tower within the fenced compound. The generator and equipment shelter will be juxtaposed on a 12' x 24' concrete pad. The Tower

33 Boston Post Road West, Marlborough, Massachusetts 01752
p: 508.954.7702 • adam.braillard@smartlinkllc.com
www.smartlinkllc.com

will not be increased in height and the compound will not be expanded. Moreover, no upgrades to the access road or parking area will be necessary.

III. Technical Feasibility

It is technically feasible for AT&T to install its equipment on the Tower. To confirm the structural integrity of the Tower, AT&T and FTP performed a structural analysis of the Tower with AT&T proposed modifications. The structural analysis, dated October 10, 2013 and attached herewith concludes that the "existing pole and foundation have sufficient capacity to support the existing, reserved and proposed antenna loads as detailed...". Consequently, the shared use of the Facility is technically feasible.

IV. Legal Feasibility

Pursuant to the Statute, the Council has the authority to issue an order approving the shared use of the Facility. By issuing an order approving AT&T's use of the Facility, AT&T will be able to proceed with obtaining a building permit from the Town of Madison for the proposed installation on the Facility. Therefore, the shared use of the Facility is legally feasible.

V. Economic Feasibility

AT&T is a federally licensed telecommunications company providing service in areas of Connecticut, including the Town of Madison. AT&T has entered into an agreement with FTP for the purpose of locating AT&T equipment at the Facility. Consequently, the shared use of the Facility is economically feasible.

VI. Environmental Feasibility

Pursuant to the Statute, AT&T's proposed sharing of the Facility will be environmentally feasible for the following reasons:

a. The proposal will neither increase the height of the Tower, nor expand the size of the base compound around the Tower. Therefore, the proposed sharing of the Facility will have an insignificant incremental visual impact on the area surrounding the Tower and will no significant change or alter the physical or environmental characteristics of the Facility.

b. The addition of AT&T equipment will not increase the noise levels by six (6) decibels or more.

c. The addition of AT&T antennas will not exceed the RF emissions standard adopted by the Federal Communications Commission ("FCC"). The cumulative "worst-case" RF emissions for the operation of the existing T-Mobile antennas and the proposed AT&T antennas will be 26.16% of the FCC standards (see attached Power Density Table).

d. The proposed installation will have no impact on the local wetlands or water resources.

e. After installation, AT&T equipment will be unmanned and will only require monthly visits by maintenance personnel who will inspect the Facility to ensure it remains in good working order.

f. AT&T's proposal will have no impact on water, sanitary or sewer systems or other municipal utilities. Additionally, the proposal complies with all applicable local, state and federal safety rules and regulations.

VII. Public Safety and Benefits

As referenced in Section III above, AT&T has performed a structural analysis of the Tower confirming that the Tower is structurally feasible to hold AT&T's additional equipment. Further, as referenced in Section VI.c above, AT&T has performed an analysis of the radio frequency emanating from its proposed antennas to ensure compliance with FCC standards. The analysis indicates that the maximum level of radio frequency energy emitting from the Facility after the installation of AT&T's antennas will be well below the FCC's exposure limits. Moreover, AT&T proposal is expected to enhance safety by improving wireless communications in the area of the Facility

VII. Conclusion

For the aforementioned reasons, AT&T proposed shared use of the Facility meet all of the requirements set forth in the Statute, and the proposal advances the Council's goal of preventing the unnecessary proliferation of towers in Connecticut. The proposal is technically, legally, economically and environmentally feasible and meets all public safety concerns. Consequently, AT&T respectfully requests that the Council issue an order approving the proposed sharing use of the Facility.

Sincerely,

Adam F. Braillard

TAB 2

CERTIFICATE OF SERVICE

This is to certify that on the 23rd day of October, 2013, the foregoing application by AT&T for an Order to Approve the Shared Use of an Existing Tower was sent, via first class mail, to the following:

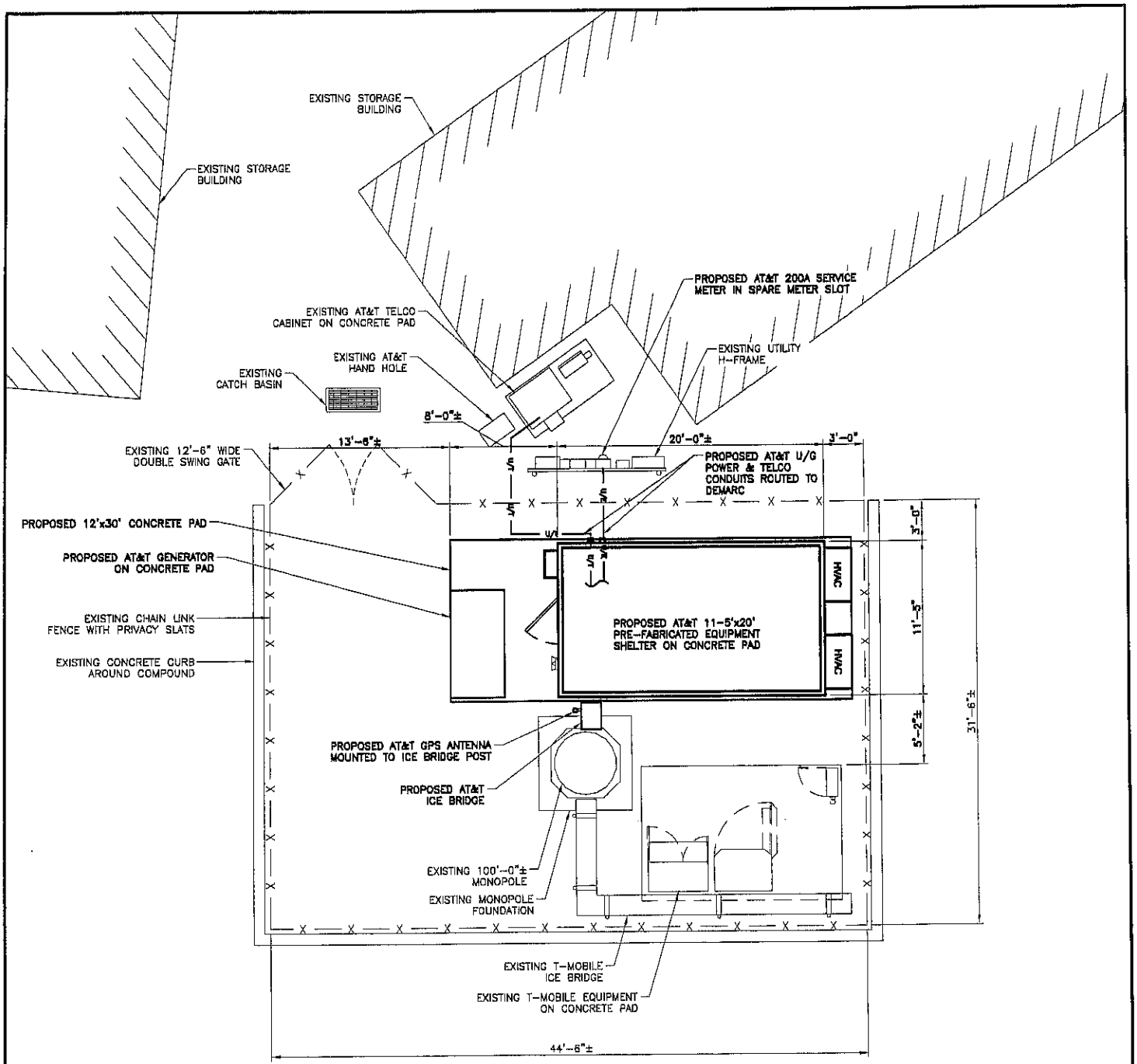
Honorable Fillmore McPherson
First Selectman, Town of Madison
8 Campus Drive,
Madison, CT 06443

and

David Milano
Milano Development Corp
7 Orchard Park Road
Madison, CT 06443

By: _____
Adam F. Braillard

TAB 3



NOTE:
ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE STRUCTURAL AND RF ENGINEERS.

SITE PLAN

GRAPHIC SCALE
0 5'-4" 10'-8" 21'-4"
3/32" = 1'-0"

APPROX. NORTH

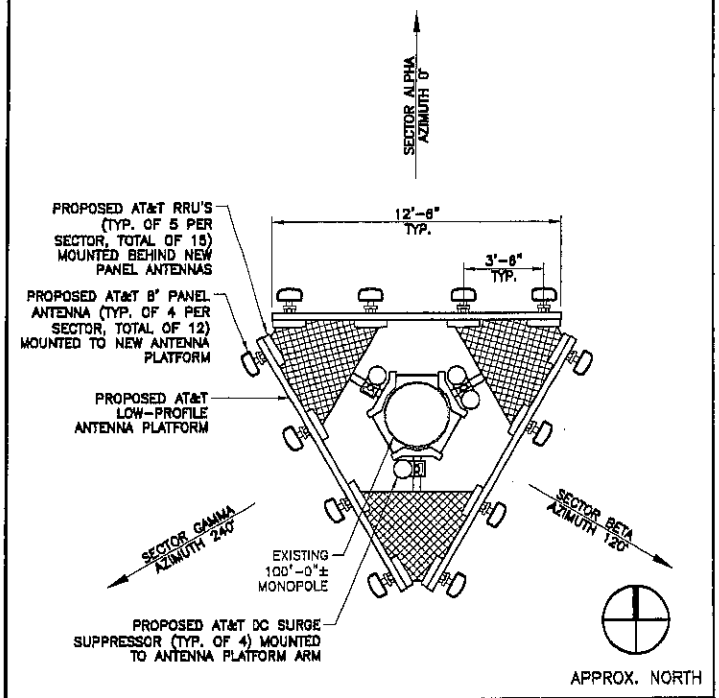
EBI Consulting
21 B Street
Burlington, MA 01803
Tel: 781.273.2500
Fax: 781.273.3311
www.ebiconsulting.com
EBI JOB NO.: 61130723

smartlink
1197 ANNAPOLIS EXCHANGE PARKWAY, SUITE 299
ANNAPOLIS, MD 21401

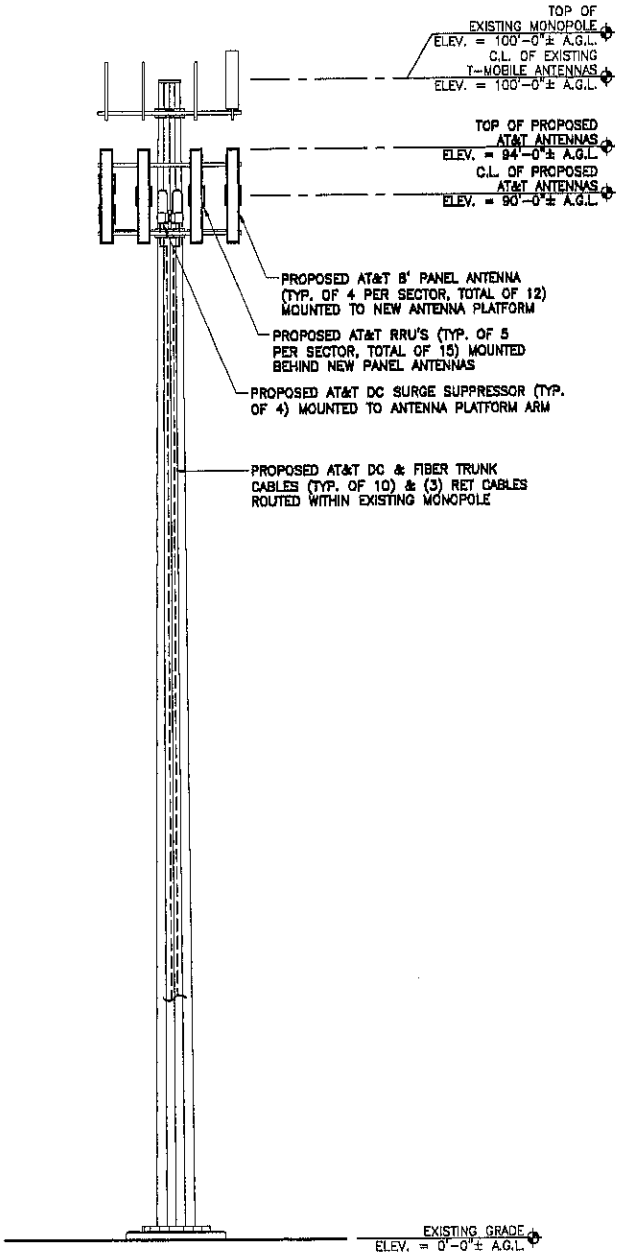
at&t Mobility
550 COCHITUATE ROAD
SUITE 13 & 14
FRAMINGHAM, MA 01701

SITE INFO:
MADISON LONG SHORE LANE
CT2440S-A
15 ORCHARD PARK ROAD
MADISON, CT 06443

SUBMITTALS				DRAWN BY:	SHEET NO:
NO.	DATE	DESCRIPTION	BY	JM	LE-1
1	09/05/13	FOR REVIEW	JM	CHECKED BY: DD	
2	10/07/13	PER COMMENTS	JT	DATE: 09/05/13	



PROPOSED ANTENNA PLAN



NOTE:
ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE STRUCTURAL AND RF ENGINEERS.

TOWER ELEVATION

GRAPHIC SCALE
0 8 16 32
1/16" = 1'-0"

EBI Consulting
21 B Street
Burlington, MA 01803
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Fax: 781.273.3311
www.ebiconsulting.com
EBI JOB NO.: 81130723

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SUBMITTALS				DRAWN BY:	SHEET NO:
NO.	DATE	DESCRIPTION	BY	JM	LE-2
1	09/05/13	FOR REVIEW	JM	CHECKED BY: DD	
2	10/07/13	PER COMMENTS	JT	DATE: 09/05/13	

TAB 4

Structural Analysis
99-ft Monopole

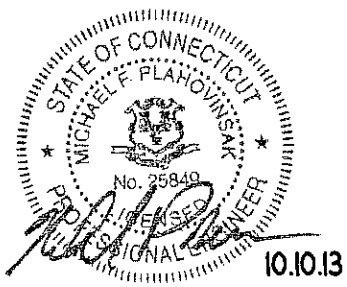
Prepared For:
Florida Tower Partners, LLC
1001 3rd Ave. West, Suite 420
Bradenton, FL 34205

MFP Project #40913-039

Site Location:
CT-1014 / Madison
New Haven Co., Connecticut
Lat/Long: 41°16'59", -72°37'23"

Analysis Type:
ANSI/TIA-222-G

October 10th 2013



Michael F. Plahovinsak, P.E.
18301 State Route 161 W, Plain City, OH 43064
614-398-6250 - mike@mfpeng.com

Project Summary:

I have completed a structural analysis of the existing monopole for the following new configuration:

- 90' – AT&T:
  - Install (3) Andrew SBNH-1D6565C + (9) SBNHH-1A65C Panel and (18) Ericsson RRUS-11 RRU's & (4) Raycap DC6-48-60-18-8F Suppressors. (8) ¾" + (2) ½" + (3) 3/8" Cables.

The pole has been analyzed in accordance with the requirements of the International Building Code per IBC section 3108.4, and the recommendations of the Telecommunications Industry Association *"Structural Standard for Steel Antenna Supporting Structures"* **ANSI/TIA-222-G.**

This analysis may be considered a "Rigorous Structural Analysis" as defined in ANSI/TIA-222-G 15.5.2.

As indicated in the conclusions of this analysis, I have determined that the existing pole and foundation ***have sufficient capacity*** to support the existing, reserved and proposed antenna loads as detailed herein. Based on the results of my analysis, no structural modifications are required at this time.

Source of Data:

Resource	Source	Job Number	Date
Pole and Foundation Drawings	Sabre Towers	11-30257	03/23/11
Geotechnical Report	Terracon	J2095225	12/21/09

Analysis Criteria:

International Building Code (All Versions) Section 3108.4
Structural Standards for Steel Antenna Supporting Structures **ANSI/TIA-222-G 2**

- Basic Wind Speed 115 mph (3-Sec Gust)
- Basic Wind Speed w/ ¾" Ice 50 mph (3-Sec Gust)
- Operational Wind Speed 60 mph (3-Sec Gust)

Structure Class	Exposure Category	Topographic Category
II (I = 1.0)	B	I

Appurtenance Listing:

Status	Elev.	Antenna / Mounting	Coax	Owner
Existing	100'	(6) RFS APX16DWV-16DWV + (3) APXV18-209014 Panel (6) RFS 11309 TMA's T-Arm Mounts	(18) 1 5/8"	T-Mobile
Proposed	***90'***	***(3) Andrew SBNH-1D6565C + (9) SBNHH-1A65C Panel*** ***(18) RRUS-11 RRUs*** ***(4) Raycap DC6-48-60-18-8-F Suppressors*** ***T-Arm Mounts***	*(8) 3/4" + (2) 1/2" + (3) 3/8"*	***AT&T***

All antenna lines assumed internally mounted, not exposed to the wind.

Foundation Analysis:

Two foundation alternatives were designed for this site. Both foundation alternatives have sufficient capacity to support the loads from this analysis.

Conclusion:

I have completed a structural analysis of the existing monopole and foundation in accordance with the project specifics outlined above. My analysis indicates that the existing monopole and foundation is stressed to a maximum of 49% of its usable capacity when considering the existing plus proposed loading. Please refer to the attached calculations for an itemized listing of all member stress ratios. The existing pole and foundation have sufficient capacity to support the proposed configuration, and structural modifications are not required.

If you have any questions about the contents of this structural report or require any additional information, please feel free to contact my office.

Sincerely,

Michael F. Plahovinsak, P.E.

mike@mfpeng.com - 614.398-6250

Standard Conditions for Providing Structural Consulting Services on Existing Structures

1. The following standard conditions are a general overview of key issues regarding the work product supplied.

2. If the existing conditions are not as represented in this structural report or attached sketches, I should be contacted to evaluate the significance of the deviation and revise the structural assessment accordingly.

3. The structural analysis has been performed assuming that the structure is in "like new" condition. No allowance was made for excessive corrosion, damaged or missing structural members, loose bolts, etc. If there are any known deficiencies in the structure that potentially compromise structural integrity, I should be made aware of the deficiencies. If I am aware of a deficiency that exists in a structure at the time of my analysis, a general explanation of the structural concern due to the deficiency will be included in the structural report, but the deficiency will not be reflected in capacity calculations.

4. The structural analysis provided is an assessment of the primary load carrying capacity of the structure. I provide a limited scope of service in that I have not verified the capacity of every weld, plate, connection detail, etc. In most cases, structural fabrication details are unknown at the time of my analysis, and the detailed field measurement of this information is beyond the scope of my services. In instances where I have not performed connection capacity calculations, it is assumed that existing manufactured connections develop the full capacity of the primary members being connected.

5. The structural integrity of the existing foundation system can only be verified if exact foundation sizes and soils conditions are known. I will not accept any responsibility for the adequacy of the existing foundations unless this site-specific data is supplied.

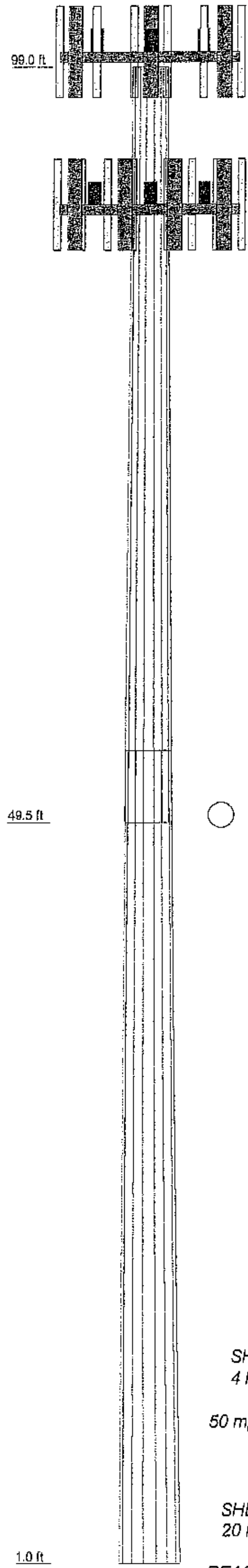
6. Miscellaneous items such as antenna mounts, coax supports, etc. have not been designed, detailed, or specified as part of my work. It is assumed that material of adequate size and strength will be purchased from a reputable component manufacturer. The attached report and sketches are schematic in nature and should not be used to fabricate or purchase hardware and accessories to be attached to the structure. I recommend field measurement of the structure before fabricating or purchasing new hardware and accessories. I am not responsible for proper fit and clearance of hardware and accessory items in the field.

7. The structural analysis has been performed considering minimum code requirements or recommendations. If alternate wind, ice, or deflection criteria are to be considered, then I shall be made aware of the alternate criteria.

Michael F. Plahovinsak, P.E. - 2013

mike@mfpeng.com

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	49.50	18	0.3125	4.75	27.2500	38.3900	A572-65	5.4
2	53.25	18	0.4375		36.6960	48.6800		10.6
								16.1



DESIGNED APPURTENANCE LOADING

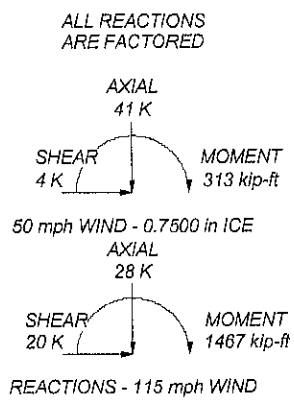
TYPE	ELEVATION	TYPE	ELEVATION
(2) RFS APX16DWV-16DWV-S-E-ACU w/Mount Pipe (T-Mobile)	100	(6) Ericsson RRUS11 Dual PA RRU (ATT)	90
RFS APXV18-209014-C w/ mount pipe (T-Mobile)	100	Andrew SBNH-1D6565C w/ mount pipe (ATT)	90
(2) RFS 11309 TMA (T-Mobile)	100	(3) Andrew SBNHH-1A65C w/ mount pipe (ATT)	90
(2) RFS APX16DWV-16DWV-S-E-ACU w/Mount Pipe (T-Mobile)	100	(6) Ericsson RRUS11 Dual PA RRU (ATT)	90
RFS APXV18-209014-C w/ mount pipe (T-Mobile)	100	Andrew SBNH-1D6565C w/ mount pipe (ATT)	90
(2) RFS 11309 TMA (T-Mobile)	100	(3) Andrew SBNHH-1A65C w/ mount pipe (ATT)	90
(2) RFS APX16DWV-16DWV-S-E-ACU w/Mount Pipe (T-Mobile)	100	(6) Ericsson RRUS11 Dual PA RRU (ATT)	90
RFS APXV18-209014-C w/ mount pipe (T-Mobile)	100	(4) Raycap DC6-48-60-18-8F Supressor (ATT)	90
(2) RFS 11309 TMA (T-Mobile)	100	T-Arm Mounts (ATT)	90
T-Arm Mounts (T-Mobile)	100		
Andrew SBNH-1D6565C w/ mount pipe (ATT)	90		
(3) Andrew SBNHH-1A65C w/ mount pipe (ATT)	90		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 115 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 31.1%



Michael F. Plahovinsak, P.E. 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com	Job: **99-ft Monopole / MFP #40913-039**			
	Project: **CT1014, Madison**			
	Client: Florida Tower Partners	Drawn by: Mike	App'd:	
	Code: TIA-222-G	Date: 10/10/13	Scale: NTS	
	Path: J:\Projects\409-Misc\40913-039\40913-039.eri		Dwg No. E-	

Tower Input Data

This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in New Haven County, Connecticut.
Basic wind speed of 115 mph.
Structure Class II.
Exposure Category B.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	99.00-49.50	49.50	4.75	18	27.2500	38.3900	0.3125	1.2500	A572-65 (65 ksi)
L2	49.50-1.00	53.25		18	36.6960	48.6800	0.4375	1.7500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	27.6704	26.7186	2449.4369	9.5628	13.8430	176.9441	4902.0968	13.3619	4.2460	13.587
	38.9822	37.7681	6918.3045	13.5175	19.5021	354.7463	13845.7123	18.8876	6.2066	19.861
L2	38.3476	50.3495	8362.8112	12.8718	18.6416	448.6108	16736.6263	25.1795	5.6885	13.002
	49.4310	66.9907	19697.5334	17.1261	24.7294	796.5216	39420.9854	33.5017	7.7977	17.823

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 5/8" (T-Mobile)	C	No	Inside Pole	99.00 - 1.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
***								
3/4" (ATT)	C	No	Inside Pole	90.00 - 1.00	8	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
						1" Ice	0.00	0.33
1/2" (ATT)	C	No	Inside Pole	90.00 - 1.00	2	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
3/8" (ATT)	C	No	Inside Pole	90.00 - 1.00	3	No Ice	0.00	0.08
						1/2" Ice	0.00	0.08
						1" Ice	0.00	0.08

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) RFS APX16DWV-16DWV-S-E-A CU w/Mount Pipe (T-Mobile)	A	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	7.00 7.50 8.00	3.52 4.18 4.85	0.07 0.12 0.17
RFS APXV18-209014-C w/ mount pipe (T-Mobile)	A	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	3.64 4.02 4.43	3.19 3.82 4.46	0.03 0.06 0.10
(2) RFS 11309 TMA (T-Mobile)	A	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	1.50 2.00 3.00	1.50 2.00 3.00	0.05 0.07 0.07
(2) RFS APX16DWV-16DWV-S-E-A CU w/Mount Pipe (T-Mobile)	B	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	7.00 7.50 8.00	3.52 4.18 4.85	0.07 0.12 0.17
RFS APXV18-209014-C w/ mount pipe (T-Mobile)	B	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	3.64 4.02 4.43	3.19 3.82 4.46	0.03 0.06 0.10
(2) RFS 11309 TMA (T-Mobile)	B	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	1.50 2.00 3.00	1.50 2.00 3.00	0.05 0.07 0.07
(2) RFS APX16DWV-16DWV-S-E-A CU w/Mount Pipe (T-Mobile)	C	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	7.00 7.50 8.00	3.52 4.18 4.85	0.07 0.12 0.17
RFS APXV18-209014-C w/ mount pipe (T-Mobile)	C	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	3.64 4.02 4.43	3.19 3.82 4.46	0.03 0.06 0.10
(2) RFS 11309 TMA (T-Mobile)	C	From Face	3.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	1.50 2.00 3.00	1.50 2.00 3.00	0.05 0.07 0.07
T-Arm Mounts (T-Mobile)	C	None		0.0000	100.00	No Ice 1/2" Ice 1" Ice	14.00 16.00 18.00	14.00 16.00 18.00	1.14 1.27 0.47
***									
Andrew SBNH-1D6565C w/ mount pipe (ATT)	A	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	11.45 12.06 12.69	9.60 11.02 12.29	0.09 0.17 0.27
(3) Andrew SBNHH-1A65C w/ mount pipe (ATT)	A	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	11.45 12.06 12.69	9.60 11.02 12.29	0.08 0.16 0.26
(6) Ericsson RRUS11 Dual PA RRU (ATT)	A	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	2.55 2.77 2.99	0.92 1.07 1.23	0.05 0.06 0.08
Andrew SBNH-1D6565C w/ mount pipe (ATT)	B	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	11.45 12.06 12.69	9.60 11.02 12.29	0.09 0.17 0.27

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(3) Andrew SBNHH-1A65C w/ mount pipe (ATT)	B	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	11.45 12.06 12.69	9.60 11.02 12.29	0.08 0.16 0.26
(6) Ericsson RRUS11 Dual PA RRU (ATT)	B	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	2.55 2.77 2.99	0.92 1.07 1.23	0.05 0.06 0.08
Andrew SBNH-1D6565C w/ mount pipe (ATT)	C	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	11.45 12.06 12.69	9.60 11.02 12.29	0.09 0.17 0.27
(3) Andrew SBNHH-1A65C w/ mount pipe (ATT)	C	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	11.45 12.06 12.69	9.60 11.02 12.29	0.08 0.16 0.26
(6) Ericsson RRUS11 Dual PA RRU (ATT)	C	From Face	3.00 0.00 0.00	0.0000	90.00	No Ice 1/2" Ice 1" Ice	2.55 2.77 2.99	0.92 1.07 1.23	0.05 0.06 0.08
(4) Raycap DC6-48-60-18-8F Supressor (ATT)	C	None		0.0000	90.00	No Ice 1/2" Ice 1" Ice	1.47 1.67 1.88	1.47 1.67 1.88	0.03 0.05 0.07
T-Arm Mounts (ATT)	C	None		0.0000	90.00	No Ice 1/2" Ice 1" Ice	14.00 16.00 18.00	14.00 16.00 18.00	1.14 1.27 0.47

Load Combinations

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

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	99 - 49.5	Pole	Max Tension	13	0.00	0.00	0.00
			Max. Compression	8	-21.87	0.00	0.00
			Max. Mx	4	-12.66	-520.56	0.00
			Max. My	2	-12.66	0.00	520.56
			Max. Vy	4	15.29	-520.56	0.00
			Max. Vx	2	-15.29	0.00	520.56
L2	49.5 - 1	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-41.22	0.00	0.00
			Max. Mx	4	-27.67	-1466.59	0.00
			Max. My	2	-27.67	0.00	1466.59
			Max. Vy	4	20.25	-1466.59	0.00
			Max. Vx	2	-20.25	0.00	1466.59

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	99 - 49.5	2.962	13	0.2450	0.0000
L2	54.25 - 1	0.935	13	0.1582	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
100.00	(2) RFS APX16DWV-16DWV-S-E-ACU w/Mount Pipe	13	2.962	0.2450	0.0000	126577
90.00	Andrew SBNH-1D6565C w/ mount pipe	13	2.500	0.2296	0.0000	70321

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	99 - 49.5	19.504	2	1.6139	0.0000
L2	54.25 - 1	6.159	2	1.0421	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
100.00	(2) RFS APX16DWV-16DWV-S-E-ACU w/Mount Pipe	2	19.504	1.6139	0.0000	19242
90.00	Andrew SBNH-1D6565C w/ mount pipe	2	16.460	1.5123	0.0000	10690

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	99 - 49.5 (1)	TP38.39x27.25x0.3125	49.50	0.00	0.0	36.7078	-12.66	2601.61	0.005
L2	49.5 - 1 (2)	TP48.68x36.696x0.4375	53.25	0.00	0.0	66.9907	-27.67	4849.69	0.006

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	99 - 49.5 (1)	TP38.39x27.25x0.3125	520.56	1978.72	0.263	0.00	1978.72	0.000
L2	49.5 - 1 (2)	TP48.68x36.696x0.4375	1466.58	4805.25	0.305	0.00	4805.25	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	99 - 49.5 (1)	TP38.39x27.25x0.3125	15.29	1300.81	0.012	0.00	3962.28	0.000
L2	49.5 - 1 (2)	TP48.68x36.696x0.4375	20.25	2424.85	0.008	0.00	9622.25	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	99 - 49.5 (1)	0.005	0.263	0.000	0.012	0.000	0.268 ✓	1.000	4.8.2 ✓
L2	49.5 - 1 (2)	0.006	0.305	0.000	0.008	0.000	0.311 ✓	1.000	4.8.2 ✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	99 - 49.5	Pole	TP38.39x27.25x0.3125	1	-12.66	2601.61	26.8	Pass
L2	49.5 - 1	Pole	TP48.68x36.696x0.4375	2	-27.67	4849.69	31.1	Pass
							Summary	
						Pole (L2)	31.1	Pass
						RATING =	**31.1**	**Pass**

Michael F. Plahovinsak, P.E.
18301 State Route 161 W
Plain City, OH 43064
Phone: 614-398-6250
email: mike@mfpeng.com

Job	Page
99-ft monopole - MFP #40913-039	BP-G
Project	**Date**
CT1014, Madison	10/10/2013
Client	**Designed by**
FLORIDA TOWER PARTNERS	Mike

Anchor Rod and Base Plate Calculation

ANSI/TIA-222-G-2

Factored Base Reactions:		*Pole Shape:*	*Anchor Rods:*	*Base Plate:*
Moment:	1467 ft-kips	18-Sided	(16) 2.25 in. A615 GR. 75	3 in. x 55.5 in. Square
Shear:	20 kips	*Pole Dia. (D_f):*	Anchor Rods in Quadrants	fy = 50 ksi
Axial:	28 kips	48.68 in	On a 55 in Bolt Circle	

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

ϕ =	0.80	TIA 4.9.9
I_{bolts} =	6050.00	in^2 Momet of Inertia
P_u =	80	kips Tension Force
V_u =	1	kips Shear Force
R_{nt} =	325.00	kips Nominal Tensile Strength
η =	0.50	for detail type (d)

The following Interation Equation Shall Be Satisfied:

$$\left(\frac{P_u + \frac{V_u}{\eta}}{\phi R_{nt}} \right) \leq 1.0$$

$0.317 \leq 1$

Base Plate Calculation According to TIA-222-G

ϕ =	0.90	TIA 4.7
M_{PL} =	665.6	in-kip Plate Moment
L =	29.8	in Section Length
Z =	67.1	Plastic Section Modulus
M_P =	3353.5	in-kip Plastic Moment
ϕM_n =	3018.1	in-kip Factored Resistance

Calculated Moment vs Factored Resistance

665.59 in-kip $\leq$ 3018 in-kip

Anchor Rods Are Adequate	**31.7%** ☑
Base Plate is Adequate	**22.1%** ☑

Michael F. Plahovinsak, P.E.
18301 State Route 161 W
Plain City, OH 43064
Phone: 614-398-6250
email: mike@mfpeng.com

Job	Page
99-ft monopole - MFP #40913-039	FND
Project	**Date**
CT1014, Madison	10/10/2013
Client	**Designed by**
FLORIDA TOWER PARTNERS	Mike

Caisson Calculation

According to ANSI/TIA-222-G-2

1. Foundation overturning resistance calculated with PLS Caisson, for Brom's method for rigid piles. Soil layers modeled after recommendations from the geotechnical report.
2. Cohesion strength for the upper 15.5 ft has been reduced by 50%
3. In lieu of a soil resistance factor fs = 0.75 (TIA-9.4.1) an additional safey fator against soil failure of 1.33 has been applied.
4. Foundation is designed with a minimum safety factor resisting overturning of 2.0
5. Foundation has been designed with factored loads per TIA-222-G.
6. Design water table = 8 ft below grade

*** PIER PROPERTIES CONCRETE STRENGTH (ksi) = 4.00 STEEL STRENGTH (ksi) = 60.00

DIAMETER (ft) = 7.000 DISTANCE FROM TOP OF PIER TO GROUND LEVEL (ft) = 1.00

*** SOIL PROPERTIES

	LAYER	TYPE	THICKNESS (ft)	DEPTH AT TOP OF LAYER (ft)	DENSITY (pcf)	CU (psf)	KP	PHI (degrees)
1	S		4.00	0.00	0.0	1.000	-0.00	
2	S		2.00	4.00	100.0	1.698	14.99	
3	S		2.00	6.00	110.0	3.000	30.00	
4	S		7.50	8.00	47.6	3.000	30.00	
5	C		30.00	15.50	67.6	6000.0		

*** DESIGN (FACTORED) LOADS AT TOP OF PIER MOMENT (ft-k) = 1467.0 VERTICAL (k) = 28.0 SHEAR (k) = 20.0
ADDITIONAL SAFETY FACTOR AGAINST SOIL FAILURE = 1.33

*** CALCULATED PIER LENGTH (ft) = 19.500

*** CHECK OF SOILS PROPERTIES AND ULTIMATE RESISTING FORCES ALONG PIER

TYPE	TOP OF LAYER BELOW TOP OF PIER (ft)	THICKNESS (ft)	DENSITY (pcf)	CU (psf)	KP	FORCE (k)	ARM (ft)
S	1.00	4.00	0.0		1.000	0.00	3.67
S	5.00	2.00	100.0		1.698	7.13	6.33
S	7.00	2.00	110.0		3.000	39.06	8.12
S	9.00	7.50	47.6		3.000	282.79	13.12
C	16.50	1.05	67.6	6000.0		353.12	17.03
C	17.55	1.95	67.6	6000.0		-654.88	18.53

*** SHEAR AND MOMENTS ALONG PIER

DISTANCE BELOW TOP OF PIER (ft)	WITH THE ADDITIONAL SAFETY FACTOR SHEAR (k)	MOMENT (ft-k)	WITHOUT ADDITIONAL SAFETY FACTOR SHEAR (k)	MOMENT (ft-k)
0.00	27.2	2046.6	20.4	1535.4
1.95	27.2	2099.7	20.4	1575.2
3.90	27.2	2152.8	20.4	1615.0
5.85	25.9	2205.5	19.5	1654.6
7.80	7.8	2243.9	5.8	1683.3
9.75	-39.7	2216.3	-29.8	1662.6
11.70	-101.3	2080.7	-76.0	1560.9
13.65	-174.4	1813.7	-130.9	1360.6
15.60	-258.9	1393.0	-194.2	1045.0
17.55	-654.6	638.8	-491.0	479.2
19.50	-0.0	-0.0	-0.0	-0.0

*** TOTAL REINFORCEMENT PCT = 0.42 REINFORCEMENT AREA (in^2) = 23.28
*** USABLE AXIAL CAP. (k) = 28.0 USABLE MOMENT CAP. (ft-k) = 3664.5

Est. Foundation Usage 49%

Minimum Steel Per ACI-318 17.85 in^2

7-ft Diameter caisson x 22-ft long (21-ft Embeded with 1-ft above grade) W/(36) #8 Vertical Rebar. Concrete strength =4000 PSI @ 28 days. Estimated Concrete Volume = 31 cubic yards.

TAB 5

MEMORANDUM OF LEASE

Prepared by:
Desa Azizi
Smartlink, LLC
33 Boston Post Road, W
Marlborough, MA 01752

Return to:
33 Boston Post Road, W
Marlborough, MA 01752

Re: Cell Site #: CT2440S; Cell Site Name: Orchard Park Lane, Madison, (CT2440S-A)
Fixed Asset Number: 12906937
State: Connecticut
County: New Haven

MEMORANDUM
OF
LEASE

This Memorandum of Lease is entered into on this 16 day of Oct, 2013, by and between Florida Tower Partners, LLC, a Delaware limited liability company, having a mailing address of 1001 Third Avenue West, Suite 420, Bradenton, FL 34205 (hereinafter referred to as "**Landlord**") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of Suite 13-F West Tower, 575 Morosgo Drive, Atlanta, GA 30324 (hereinafter referred to as "**Tenant**").

1. Landlord and Tenant entered into a certain Lease Agreement ("**Agreement**") on the 16 day of October, 2013, for the purpose of installing, operating and maintaining a communications facility and other improvements. All of the foregoing is set forth in the Agreement.

2. The initial lease term will be five (5) years commencing on the Rent Commencement Date of the Agreement, with four (4) successive five (5) year options to renew.

3. The portion of the land being leased to Tenant and associated easements are described in **Exhibit 1** annexed hereto.

4. This Memorandum of Lease is not intended to amend or modify, and shall not be deemed or construed as amending or modifying, any of the terms, conditions or provisions of the Agreement, all of which are hereby ratified and affirmed. In the event of a conflict between the provisions of this Memorandum of Lease and the provisions of the Agreement, the provisions of the Agreement shall control. The Agreement shall be binding upon and inure to the benefit of the parties and their respective heirs, successors, and assigns, subject to the provisions of the Agreement.

IN WITNESS WHEREOF, the parties have executed this Memorandum of Lease as of the day and year first above written.

"LANDLORD"

FLORIDA TOWER PARTNERS, LLC
a Delaware limited liability company

By: _____
Print Name: Brett Buggeln
Its: Manager/President
Date: 10/16/13

"TENANT"

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

By: AT&T Mobility Corporation
Its: Manager

By: _____
Print Name: Kevin L. Mason
Its: Area Manager
Date: 10-11-2013

[ACKNOWLEDGMENTS APPEAR ON THE NEXT PAGE]

TAB 6

smartlink

Power Density Calculations

Applicant:	New Cingular Wireless PCS, LLC d/b/a AT&T
Site ID:	CT2440SA
Site Type:	Existing 100' Monopole Tower
Address:	15 Orchard Park Road, Madison, CT 06443
Date:	October 21, 2013

33 Boston Post Road West, Marlborough, Massachusetts 01752
p: 508.954.7702 • adam.blaillard@smartlinkllc.com
www.smartlinkllc.com

1. Existing Power Density [1]

Carrier	#Channels	ERP/Ch	Ant Ht	Power Density (mW/cm2)	Frequency MHz	Limit	%MPE
T-Mobile GSM	8	144	100'	0.0414	1945	1.0000	4.14%
T-Mobile UMTS	2	730	100'	0.0414	2100	1.0000	5.25%
						TOTAL	**9.39%**

2. Proposed AT&T Power Density [2]

Carrier	#Channels	ERP/Ch	Ant Ht	Power Density (mW/cm2)	Frequency MHz	Limit	%MPE
AT&T	2	500	90'	0.0444	800 Band	0.5867	7.57%
AT&T	2	500	90'	0.0444	1900 Band	1.0000	4.44%
AT&T	1	500	90'	0.0222	700 Band	0.4667	4.76%
						TOTAL	**16.77%**

3. Cumulative Power Density Calculation Results

Carrier	#Channels	ERP/Ch	Ant Ht	Power Density (mW/cm2)	Frequency MHz	Limit	%MPE
T-Mobile GSM	8	144	100'	0.0414	1945	1.0000	4.14%
T-Mobile UMTS	2	730	100'	0.0414	2100	1.0000	5.25%
AT&T	2	500	90'	0.0444	800 Band	0.5867	7.57%
AT&T	2	500	90'	0.0444	1900 Band	1.0000	4.44%
AT&T	1	500	90'	0.0222	700 Band	0.4667	4.76%
						TOTAL	**26.16%**

[1] This Power Density information was taken from the Connecticut Siting Council database dated October 1, 2013.
[2] This Power Density information is based on worse case assumptions from AT&T's radio frequency engineers.

4. **Conclusion:**

The addition of AT&T's antennas on the existing tower will result in the cumulative maximum permissible exposure (MPE) level of 26.16%. The proposal complies with the National Council on Radiation Protection and Measurements standard for MPE adopted by the Federal Communications Commission ("FCC"). Moreover, the maximum level of radio-frequency energy emitted from AT&T's installation will be well below the FCC's mandated radio frequency exposure limits.