STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

June 26, 2009

Thomas J. Regan, Esq.
Brown Rudnick LLP
CityPlace I, 185 Asylum Street
Hartford, CT 06103

RE: **EM-T-MOBILE-080-090527** - Omnipoint Communications, as subsidiary of T-Mobile USA, Inc., notice of intent to modify an existing telecommunications facility located at 119 Empire Avenue, Meriden, Connecticut.

Dear Attorney Regan:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated May 27, 2009, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Michael S. Rohde, Mayor, City of Meriden
Lawrence Kendzior, City Manager, City of Meriden
Dominick Caruso, City Planner, City of Meriden
Atlas Container Corporation

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Daniel F. Caruso
Chairman

May 29, 2009

The Honorable Michael S. Rohde
Mayor
City of Meriden
City Hall
142 East Main Street
Room 124
Meriden, CT 06450

RE: **EM-T-MOBILE-080-090527** - Omnipoint Communications, as subsidiary of T-Mobile USA, Inc., notice of intent to modify an existing telecommunications facility located at 119 Empire Avenue, Meriden, Connecticut.

Dear Mayor Rohde:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by June 12, 2009.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Dominick Caruso, City Planner, City of Meriden
Lawrence Kendzior, City Manager, City of Meriden

THOMAS J. REGAN
Direct Dial: (860) 509-6522
tregan@brownrudnick.com

BROWNRUDNICK
CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

Via Hand Delivery

May 27, 2009

ORIGINAL

Daniel F. Caruso, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: T-Mobile USA, Inc - Exempt Modification

Dear Mr. Caruso:

On behalf of T-Mobile USA, Inc., enclosed for filing is an original and five (5) copies of a Notice to Make an Exempt Modification to an Existing Facility at 119 Empire Avenue in Meriden.

I have also enclosed a sixth copy of the Notice which I would like to have date-stamped and returned to the courier delivering this package.

Also enclosed is a check in the amount of $500.00 to cover the filing fee. If you have any questions, please feel free to contact me.

Very truly yours,

BROWN RUDNICK BERLACK ISRAELS LLP

By: Thomas J. Regan
Thomas J. Regan

TJR/bh
Enclosures

40260395 v1 - REGANTJ - 025064/0016

cc/encls: via 1st Class Mail:

The Honorable Michael S. Rohde, Mayor
City of Meriden
City Hall
1452 Main Street
Meriden, CT 06450

CONNECTICUT SITI EM-T-MOBILE-080-090527

In re:

T-Mobile USA, Inc. Notice to Make an Exempt Modification to an Existing Facility, 119 Empire Avenue, Meriden, Connecticut.	:	EXEMPT MODIFICATION NO. _____
	:	May 27, 2009

ORIGINAL

RECEIVED
MAY 27 2009
CONNECTICUT
SITING COUNCIL

NOTICE OF EXEMPT MODIFICATION

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), T-Mobile USA, Inc. ("T-Mobile") hereby gives notice to the Connecticut Siting Council ("Council") and the City of Meriden of T-Mobile's intent to make an exempt modification to an existing monopole located through an existing water tank (the "Tower") located at 119 Empire Avenue, in Meriden, Connecticut. Specifically, T-Mobile plans to upgrade its wireless system in Connecticut by implementing its Universal Mobile Telecommunications System ("UMTS"). UMTS is a third-generation ("3G") technology that utilizes a code division multiple access ("CDMA") base to allow for fast and large data transfers. To accomplish this upgrade, T-Mobile must modify its antenna and equipment configurations at many of its existing sites.

Once the UMTS upgrade is complete, T-Mobile will operate on a more unified communication system, allowing international wireless telephones to function world-wide. Furthermore, UMTS will enhance GPS navigation capabilities and provide emergency responders with more advanced tracking capabilities. The proposed UMTS technology is compatible with the existing second-generation ("2G") Global System for Mobile Communication ("GSM") currently on the Tower and the proposed upgrade is expected to enhance the existing 2G system. In order to accomplish the upgrade at this site, T-Mobile plans to add UMTS technology, update GSM technology and install associated equipment at the base of the Tower.

Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), T-Mobile's plans do not constitute a modification subject to the Council's review because T-Mobile will not change the height of the Tower, will not extend the boundaries of the compound, will not increase the

BROWN RUDNICK LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

noise levels at the site, and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

The Tower is a 125-foot monopole tower located through an existing water tank. The Tower is located at 119 Empire Avenue, in Meriden, Connecticut (41.5732, -72.7792). The Tower is owned by Atlas Container Corporation. There are multiple carriers located on the Tower. Currently, T-Mobile has 6 antennas and 4[1] Tower Mounted Amplifiers ("TMA") located on the Tower with a centerline of 115 feet. A site plan with Tower specifications is attached.

T-Mobile proposes to remove and replace 3 of its existing antennas, remove and replace its 4 existing TMA and add 2 TMA to the Tower. T-Mobile plans to remove and replace 3 of its existing antennas with 3 UMTS antennas. T-Mobile also plans to remove and replace its 4 existing TMA and add 2 TMA for a total of 6 TMA to be located on the Tower. The 6 new TMA will include 3 new GSM Twin TMA and 3 UMTS Twin TMA. The proposed antennas and TMA will have the same centerline as the existing antennas and TMA - 115 feet. To confirm the Tower can support these changes, T-Mobile commissioned Armor Tower to perform a structural analysis of the Tower (attached). According to the structural analysis, dated April 23, 2009, "...the monopole [is] adequate ... to support the proposed antenna loading" (Page 1, Structural Analysis).

In addition, T-Mobile plans to utilize its 12 existing 1-5/8 inch coax cables. T-Mobile proposes to install the UMTS equipment cabinet on its existing 6-foot by 20-foot (approximately) concrete pad. Hence, no increase in the size of the concrete pad is necessary.

Therefore, excluding brief, minor, construction-related noise during the installation of the new technology and the installation of the equipment cabinet, T-Mobile's changes to the Tower will not increase noise levels at the site.

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CITYPLACE I
185 ASYLUM STREET
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[1] Currently there are 4 TMA located on the Tower. The site plan and structural analysis incorrectly state that T-Mobile proposes to remove 6 existing TMA from the Tower. T-Mobile proposes to locate 6 new TMA on the Tower by removing and replacing its 4 existing TMA and adding 2 TMA to the Tower.

The proposed antennas and TMA will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency exposure measured around the Tower will be well below the National Council on Radiation Protection and Measurements' ("NCRP") standard adopted by the Federal Communications Commission ("FCC"). The worst-case power density analysis measured at the base of the Tower indicates that T-Mobile's antennas will emit 7.85% of the NCRP's standard for maximum permissible exposure. A cumulative power density analysis indicates that together, all of the antennas on the Tower will emit only 72.87% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be well below the FCC mandated radio frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, T-Mobile's proposed plan to remove and replace antennas, remove and replace TMA and add TMA at this site does not constitute a modification subject to the Council's jurisdiction because T-Mobile will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise levels at the site, and the total radio frequency electromagnetic radiation power density will stay within all applicable standards. *See* Conn. Agencies Regs. § 16-50j-72.

T-Mobile USA, Inc.

By: Thomas J. Regan

Thomas J. Regan
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6622

BROWN RUDNICK LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

Certificate of Service

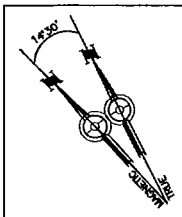
This is to certify that on this 27th day of May, 2009, the foregoing Notice of Exempt Modification was sent, via first class mail, to the following:

City of Meriden
Mayor Michael S. Rohde
City Hall
142 East Main Street
Meriden, CT 06450

By: Thomas J. Regan
Thomas J. Regan

40260322 v1 - 025064/0016

BROWN RUDNICK LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500



FINAL CONFIGURATION	
CABINETS: 2	(E) (1) CABINET TO REMAIN (P) (1) CABINET TO BE ADDED
ANTENNAS: 6	(E) (3) TO REMAIN (P) (3) QUAD POLE TO REPLACE (E) (3) ANTENNAS
TMA: 6	(P) (6) TO REPLACE (E) (6) TMA's
COAX: 12	(E) (12) TO REMAIN

(P) (3) QUAD POLE UMTS ANTENNAS AND (3) TWIN AWS TMA's TO REPLACE (E) (3) DUAL POLE GSM ANTENNAS AND (E) (3) SINGLE GSM TMA's. (E) (12) 1-5/8" COAX CABLES TO REMAIN. TYPICAL OF (1) ANTENNA, (1) TMA AND (2) 1-5/8" COAX CABLES PER SECTOR

(P) (3) TWIN PCS TMA's TO BE ADDED (E) (1) SINGLE GSM TMA's TO BE REMOVED TYPICAL OF (1) TMA PER SECTOR

(E) (3) DUAL POLE GSM PANEL ANTENNAS AND (6) 1-5/8" COAX CABLES TO REMAIN TYPICAL OF (1) ANTENNA AND (2) COAX CABLES PER SECTOR

(E) WATER TANK

(E) 6' HIGH CHAIN LINK FENCE W/ 1' BARB WIRE

(E) T-MOBILE EQUIPMENT CABINET

(P) ERICCON 3160 CABINET ON (E) T-MOBILE CONC. PAD

SECTOR ALPHA 60°

SECTOR GAMMA 300°

SECTOR BETA 180°

1 SHT-2

(E) DRIVE WAY

ANTENNA AZIMUTHS:
SECTOR A= 60°
SECTOR B= 180°
SECTOR C= 300°

EMPIRE AVENUE

ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

PLAN

SCALE: 1" = 16'-0"

8 0 8 16 24

TRANSCEND WIRELESS, LLC
10 INDUSTRIAL AVE.
MAHWAH, NJ 07430
OFFICE: (201) 684-0055
FAX:(201) 684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC. DBA T-MOBILE USA, INC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NUMBER: CT11603E
SITE NAME: ATLAS CONTAINER WT
ADDRESS: 119 EMPIRE AVE MERIDEN, CT 06450
DRAWN BY: G.C.

REVISION	DATE
0: FINAL	03-17-09
A: REVIEW	02-06-09

APPROVALS

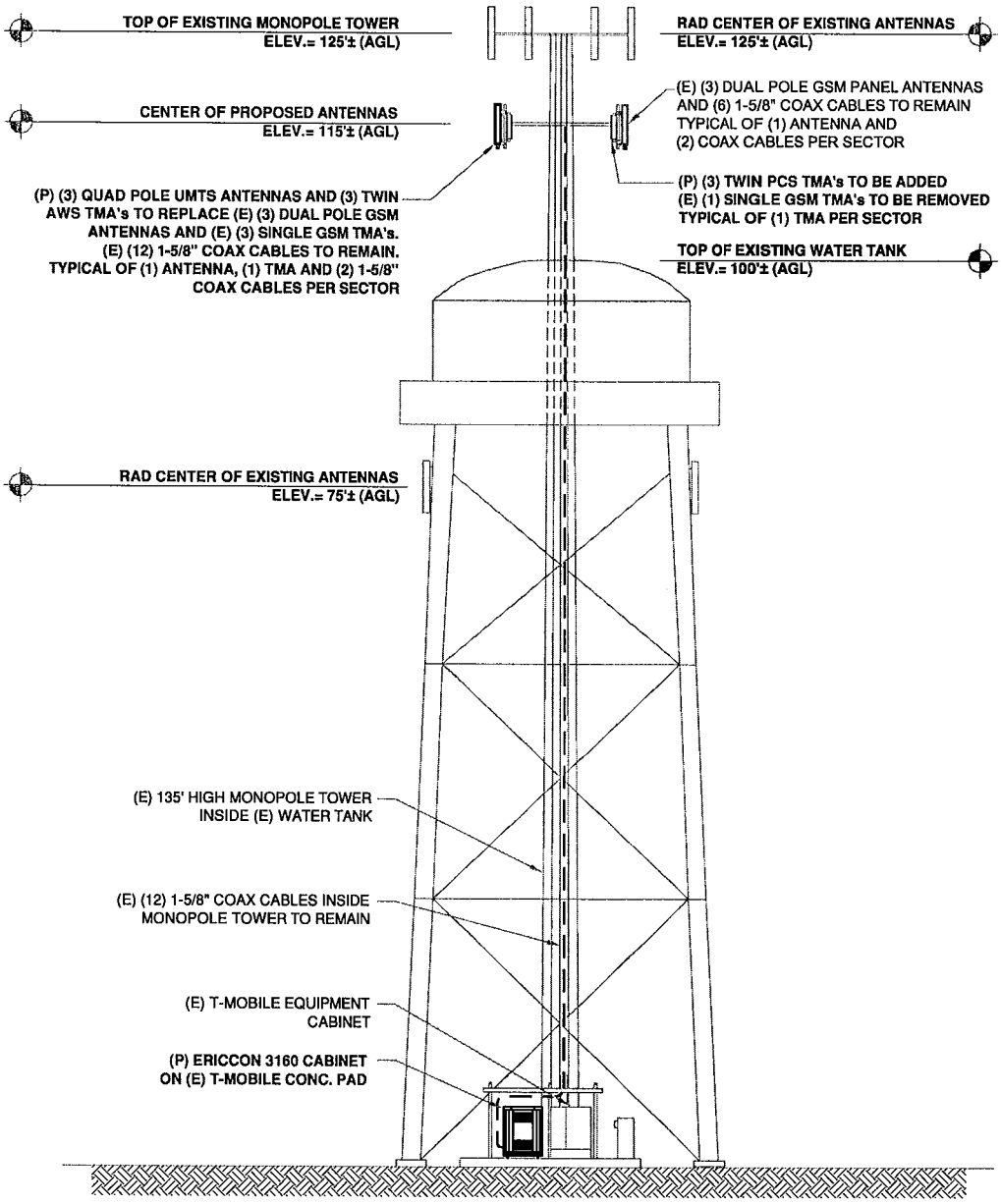
Site Owner — Date

Construction Manager — Date

RF Engineer — Date

Site Acquisition — Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

ELEVATION

SCALE: 1" = 20'-0"

10 0 10 20 30

TRANSCEND WIRELESS, LLC
10 INDUSTRIAL AVE.
MAHWAH, NJ 07430
OFFICE: (201) 684-0055
FAX:(201) 684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC.
DBA T-MOBILE USA, INC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NUMBER:	
CT11603E	
SITE NAME:	
ATLAS CONTAINER WT	
ADDRESS:	
119 EMPIRE AVE MERIDEN, CT 06450	
DRAWN BY	
G.C.	
0: FINAL	03-17-09
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REVISION	DATE

APPROVALS

Site Owner	Date
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ARMOR TOWER

Structural Analysis of 125 ft Monopole Tower

Site Number: T-Mobile CT11603E

Site Name: Atlas Container WT
County: New Haven
Location: 119 Empire Avenue, Meriden, CT 06450

Checked By:

Patrick Botimer
Structural Engineer

T-Mobile USA

35 Griffin Road South
Bloomfield, CT 06002

April 2009

1 N. Main St., Suite 312, Cortland, NY 13045 607.591.2318 Fax 866.870.0840 www.armortower.com

ARMOR TOWER

April 23, 2009

Mr. Hans Fiedler
T-Mobile USA
35 Griffin Road South
Bloomfield, CT 06002

Re: CT11603E – Atlas Container site (125' monopole through water tank)
119 Empire Avenue, Meriden, CT 06450

Dear Mr. Fiedler,

We have completed the structural analysis of the subject structure and **have found the monopole to be adequate within the scope of this analysis to support the proposed antenna loading**. The monopole was analyzed according to the requirements of EIA 222-F standard for New Haven County for 85 mph (fastest mile) wind speed with no ice and 74 mph wind with ½" ice. This analysis is based on the T-Mobile RFDS dated 2/12/09, the Atlantis Group lease exhibit dated 3/17/09, an EEI monopole structural drawing date 10/5/05 and pictures (all provided by Atlantis Group).

The tower we analyzed is a 125' EEI monopole consisting of (4) slip-jointed polygon tubular sections. Pole diameters range from 70" at the base to 30" at the top. Analyzed foundation reactions are less than the stated reaction from the EEI monopole drawing.

The antenna loading used in the analysis consisted of all existing antennas and transmission lines, with the exception of the following:
• Remove (3) EMS RR90-17-02DP antennas (18 lb. wt. ea.), (6) ddTMAs (~10 lb each) @115' (T-Mobile)
• Add (3) RFS APX16DWV-16DWVS-A20 (41 lb ea.), (3) RFS Twin AWS TMAs (13 lb. ea.) @ 115' for T-Mobile on the existing platform.
• Add (3) RFS Twin PCS TMAs (19 lb wt ea.)
• Re-use existing feed lines.

• Install one new RBS 3106 equipment cabinet (1925 lb fully equipped) on the existing concrete pad, located east from the tower. The existing ground mounted equipment pad is capable of supporting the proposed cabinet, assuming normal soils.

The results of the analysis showed all monopole elements to be loaded within allowable limits. Note that this analysis reviewed the loading of the monopole without reducing load for the shielded portion of the pole contained within the water tank. Data for the water tank structure was not provided; therefore analysis of the monopole in tandem with the water tank was not performed. It is assumed that the deflections of the two structures are identical under wind loading and that the monopole is not loaded by the water tank. The substantial size of the monopole in comparison with the loading suggests that the monopole structure may have been designed for compatible deflection.

We appreciate the opportunity to provide our professional services to Atlantis Group and T-Mobile, and if we can be of further assistance, please do not hesitate to contact us.

Sincerely,
ARMOR TOWER, INC.

Derek Hartzell
Armor Tower, Inc

PRIMARY ASSUMPTIONS USED IN THE ANALYSIS

1. Allowable steel stresses are defined by AISC-ASD 9th Edition and all welds conform to AWS D1.1 specifications.

2. Armor Tower has been commissioned to analyze this tower according to the requirements of TIA/EIA 222-F for New Haven County, CT. Per this code, a basic wind speed of 85 mph (fastest-mile) without ice and 74 mph with ½" ice has been considered. It is the client's responsibility to check with local authorities or the tower owner if a higher wind or ice loading is required to be considered in the analysis. Note that Section 3108.4 of the International Building Code states that "Towers shall be designed to resist wind loads according to TIA/EIA-222."

3. The acceptability of the analyzed antenna loading is the responsibility of Atlantis Group and its affiliates to confirm with the respective carriers.

4. Any deviation from the analyzed antenna loading will require a re-analysis of the tower for verification of structural integrity. Proposed feed lines are to be installed inside the monopole.

5. This analysis assumes all tower members galvanized adequately to prevent corrosion of the steel and that all tower members are in "like new" condition with no physical deterioration. This analysis also assumes the tower has been maintained properly per TIA/EIA-222-F Annex E recommended inspection and maintenance procedures for tower owners and is in a plumb condition.

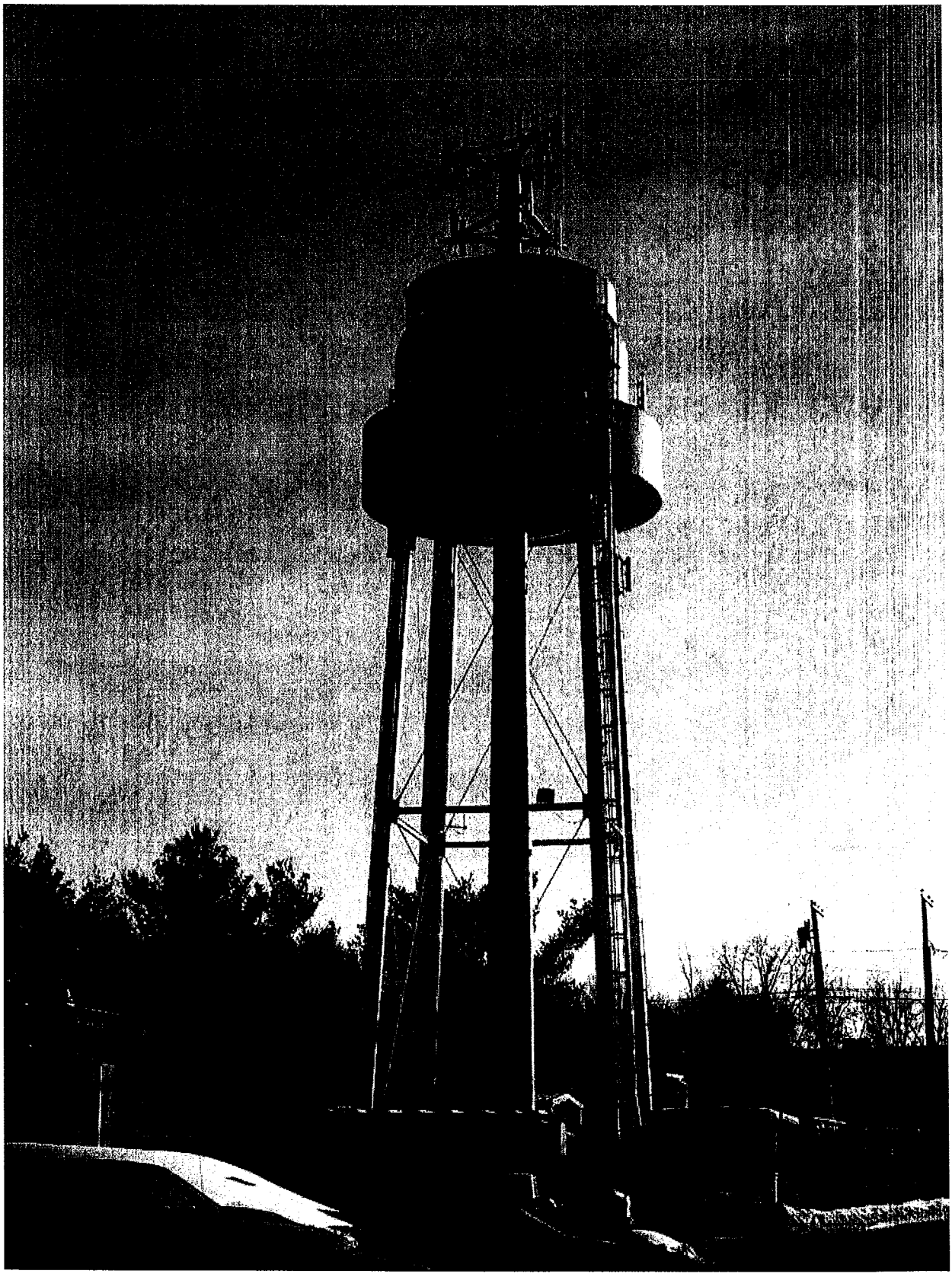
6. No accounting for residual stresses due to incorrect tower erection can be made. This analysis assumes all bolts are appropriately tightened providing necessary connection continuity and that the installation of the tower was performed by a qualified tower erector.

7. This certification does not include foundations. Geotechnical or foundation information was not provided to Armor Tower to complete a foundation analysis for the proposed loading. A comparison of tower reactions shows that proposed reactions are less than design reactions design reactions.

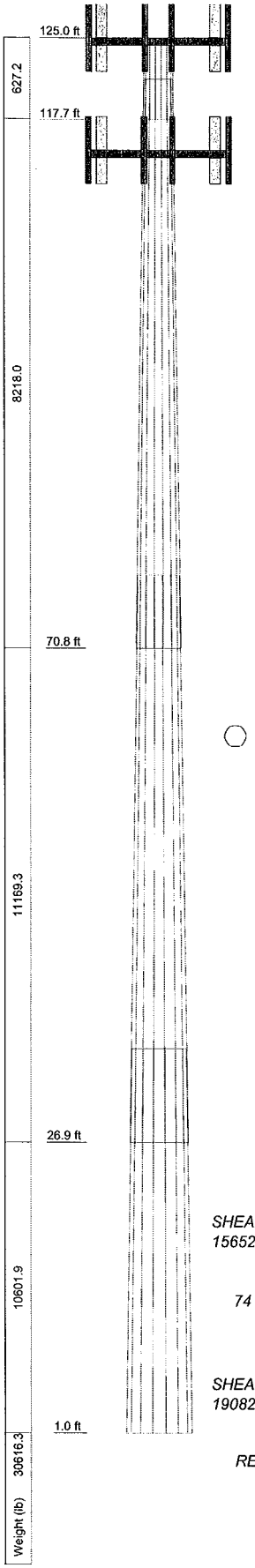
8. No conclusions, expressed or implied, shall indicate that Armor Tower has made an evaluation of the original design, materials, fabrication, or potential erection deficiencies. Any information contrary to that assumed for the purpose of preparing this analysis could alter the findings and conclusions as stated.

9. Tower member sizes and geometry are based on a the EEI drawing. Existing antenna loading was obtained from site pictures (for Verizon antennas) and the RFDS (for T-Mobile antennas) with heights from Atlantis Group. No site visit was performed by Armor Tower.

10. The investigation of the load-carrying capacities of the antenna supporting frames/mounts is outside the scope of this analysis. We recommend that material of adequate size and strength be utilized for this purpose.



1 North Main Street, Suite 312, Cortland, NY 13045 607.591.2318 Fax 866.870.0840 www.armortower.com



DESIGNED APPURTENANCE LOADING

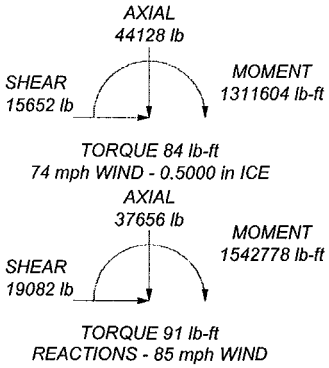
TYPE	ELEVATION	TYPE	ELEVATION
EEI Band-On 12' Low Profile Platform w/12 pipe (VerizonWireless(E))	125	APX16DWV-16DWVS-C-A20 (T-Mobile(P))	115
(2) 12"x6"x48" antenna (VerizonWireless(E))	125	RFS ATMAA1412D-1A20 Twin AWS TMA (T-Mobile(P))	115
(2) 12"x6"x48" antenna (VerizonWireless(E))	125	RR90-17-02DP (T-Mobile(E))	115
(2) 12"x6"x48" antenna (VerizonWireless(E))	125	RFS ATM192012T-0 Twin PCS TMA (T-Mobile(P))	115
(2) 45"x5" rounded antenna (VerizonWireless(E))	125	APX16DWV-16DWVS-C-A20 (T-Mobile(P))	115
(2) 45"x5" rounded antenna (VerizonWireless(E))	125	RFS ATMAA1412D-1A20 Twin AWS TMA (T-Mobile(P))	115
(2) 45"x5" rounded antenna (VerizonWireless(E))	125	RR90-17-02DP (T-Mobile(E))	115
EEI Band-On 12' Low Profile Platform w/12 pipe (T-Mobile(E))	115	RFS ATM192012T-0 Twin PCS TMA (T-Mobile(P))	115
RR90-17-02DP (T-Mobile(E))	115	APX16DWV-16DWVS-C-A20 (T-Mobile(P))	115
RFS ATM192012T-0 Twin PCS TMA (T-Mobile(P))	115	RFS ATMAA1412D-1A20 Twin AWS TMA	1

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 a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 60 mph wind.
5. Weld together tower sections have flange connections.
6. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
7. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
8. Welds are fabricated with ER-70S-6 electrodes.
9. (P) = proposed
10. (E) = existing
11. TOWER RATING: 43.3%

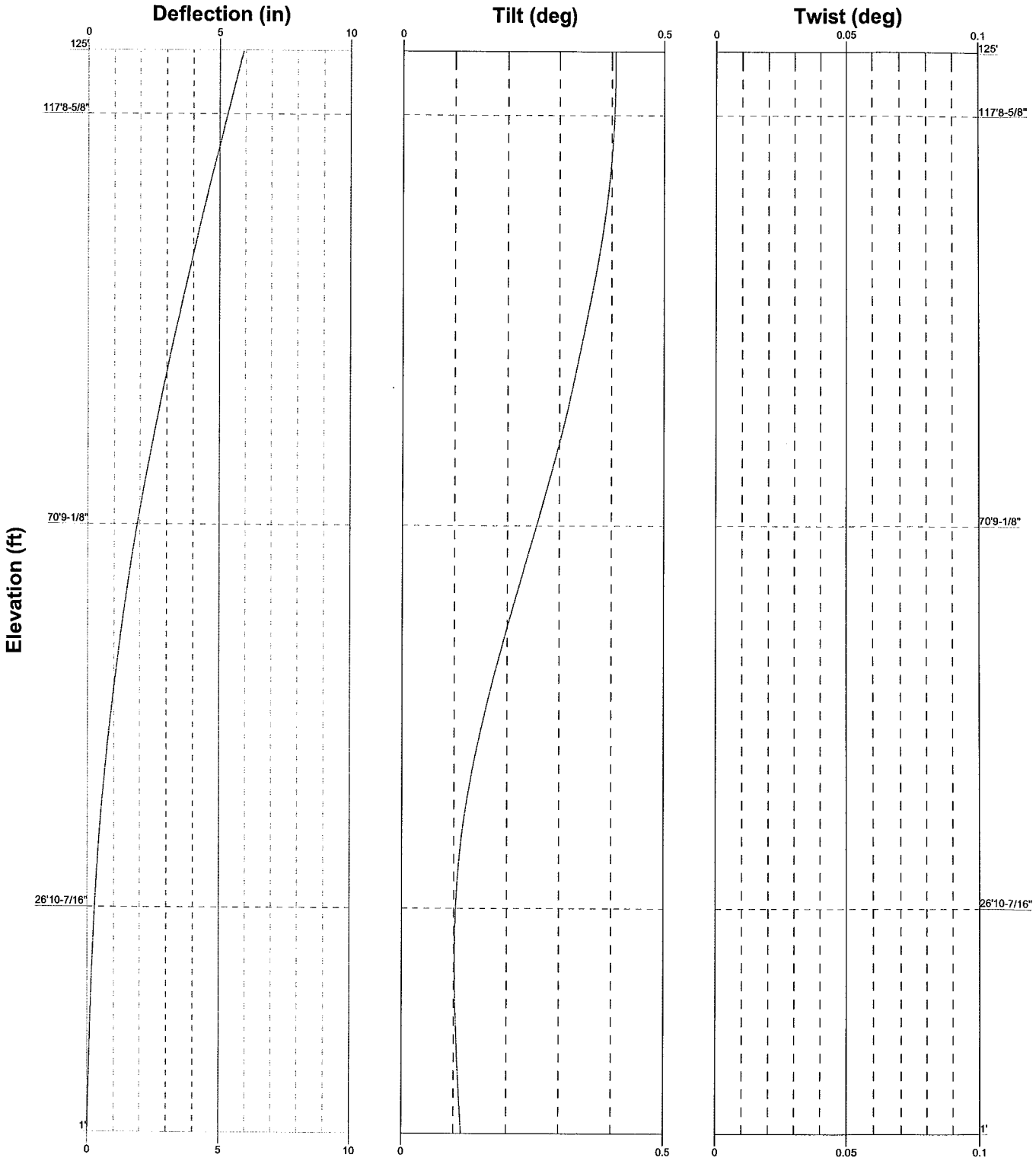


ARMOR TOWER
Armor Tower Inc.
1 North Main Street
Cortland, NY 13045
Phone: (607) 591-2318
FAX: (866) 870-0840

Job: ***Analysis of 125' monopole***		
Project: ***T-Mobile-CT11603E Atlas Container WT***		
Client: Atlantis Group	Drawn by: DRH	App'd:
Code: TIA/EIA-222-F	Date: 04/22/09	Scale: NTS
Path: C:\Armor Tower\Atlantis Group\T-Mobile\MATCH 2-09\LEVEL 1\CT11603E Atlas Container WT MP.RSA Calcs\125ft.ec		Dwg No. E-1

TIA/EIA-222-F - Service - 60 mph

Maximum Values



Armor Tower Inc.
1 North Main Street
Cortland, NY 13045
Phone: (607) 591-2318
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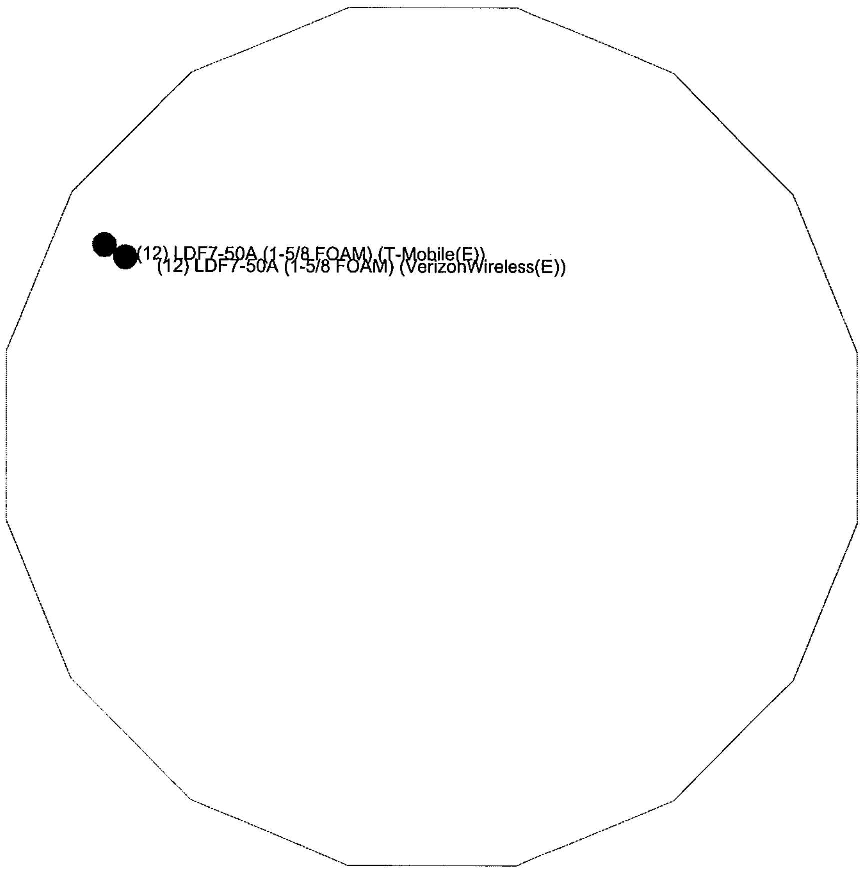
Job: *Analysis of 125' monopole*		
Project: *T-Mobile-CT11603E Atlas Container WT*		
Client: Atlantis Group	Drawn by: DRH	App'd:
Code: TIA/EIA-222-F	Date: 04/22/09	Scale: NTS
Path: C:\Armor Tower\Atlantis Group\T-Mobile\BATCH 4-2-09\LEVEL II\CT11603E Atlas Container WT MONRSA Carlon\125'.mat		Dwg No. E-5

Feedline Plan

Round | Flat | App In Face | App Out Face



Armor Tower Inc. 1 North Main Street Cortland, NY 13045 Phone: (607) 591-2318 FAX: (866) 870-0840	Job: ***Analysis of 125' monopole***		
	Project: ***T-Mobile-CT11603E Atlas Container WT***		
	Client: Atlantis Group	Drawn by: DRH	App'd:
	Code: TIA/EIA-222-F	Date: 04/22/09	Scale: NTS
	Path:		Dwg No. E-7

ARMOR TOWER

Armor Tower Inc.
1 North Main Street
Cortland, NY 13045
Phone: (607) 591-2318
FAX: (866) 870-0840

Job	Page
Analysis of 125' monopole	1 of 6
Project	**Date**
T-Mobile-CT11603E Atlas Container WT	17:26:38 04/22/09
Client	**Designed by**
Atlantis Group	DRH

Force Totals

Load Case	*Vertical Forces* lb	*Sum of Forces X* lb	*Sum of Forces Z* lb	*Sum of Overturning Moments, M_x* lb-ft	*Sum of Overturning Moments, M_z* lb-ft	*Sum of Torques* lb-ft
Leg Weight	30616.30					
Bracing Weight	0.00					
Total Member Self-Weight	30616.30			-28.41	-49.21	
Total Weight	37656.50			-28.41	-49.21	
Wind 0 deg - No Ice		-13.54	-19074.19	-1529345.43	1493.84	78.88
Wind 30 deg - No Ice		9517.56	-16511.96	-1323684.28	-762480.53	45.54
Wind 60 deg - No Ice		16498.43	-9525.37	-763350.61	-1322162.03	0.00
Wind 90 deg - No Ice		19058.56	13.54	1514.63	-1527584.47	-45.54
Wind 120 deg - No Ice		16511.96	9548.82	765966.42	-1323705.07	-78.88
Wind 150 deg - No Ice		9541.00	16525.50	1325170.50	-765153.15	-91.08
Wind 180 deg - No Ice		13.54	19074.19	1529288.61	-1592.25	-78.88
Wind 210 deg - No Ice		-9517.56	16511.96	1323627.46	762382.12	-45.54
Wind 240 deg - No Ice		-16498.43	9525.37	763293.79	1322063.62	0.00
Wind 270 deg - No Ice		-19058.56	-13.54	-1571.45	1527486.06	45.54
Wind 300 deg - No Ice		-16511.96	-9548.82	-766023.23	1323606.66	78.88
Wind 330 deg - No Ice		-9541.00	-16525.50	-1325227.32	765054.74	91.08
Member Ice	3864.17					
Total Weight Ice	44127.82			-45.05	-78.03	
Wind 0 deg - Ice		-10.72	-15645.49	-1297091.31	1143.55	72.85
Wind 30 deg - Ice		7807.28	-13544.03	-1122709.27	-646837.97	42.06
Wind 60 deg - Ice		13533.32	-7813.46	-647510.27	-1121520.68	0.00
Wind 90 deg - Ice		15633.11	10.72	1176.53	-1295713.74	-42.06
Wind 120 deg - Ice		13544.03	7832.02	649536.00	-1122742.25	-72.85
Wind 150 deg - Ice		7825.84	13554.75	1123840.75	-648953.80	-84.12
Wind 180 deg - Ice		10.72	15645.49	1297001.21	-1299.61	-72.85
Wind 210 deg - Ice		-7807.28	13544.03	1122619.17	646681.91	-42.06
Wind 240 deg - Ice		-13533.32	7813.46	647420.16	1121364.62	0.00
Wind 270 deg - Ice		-15633.11	-10.72	-1266.63	1295557.68	42.06
Wind 300 deg - Ice		-13544.03	-7832.02	-649626.10	1122586.19	72.85
Wind 330 deg - Ice		-7825.84	-13554.75	-1123930.85	648797.74	84.12
Total Weight	37656.50			-28.41	-49.21	
Wind 0 deg - Service		-6.74	-9504.09	-762041.04	719.65	39.30
Wind 30 deg - Service		4742.31	-8227.41	-659566.28	-379945.78	22.69
Wind 60 deg - Service		8220.67	-4746.21	-380368.88	-658818.23	0.00
Wind 90 deg - Service		9496.31	6.74	740.44	-761174.04	-22.69
Wind 120 deg - Service		8227.41	4757.89	381643.75	-659587.08	-39.30
Wind 150 deg - Service		4753.99	8234.16	660278.32	-381277.47	-45.38
Wind 180 deg - Service		6.74	9504.09	761984.22	-818.06	-39.30
Wind 210 deg - Service		-4742.31	8227.41	659509.46	379847.37	-22.69
Wind 240 deg - Service		-8220.67	4746.21	380312.06	658719.82	0.00
Wind 270 deg - Service		-9496.31	-6.74	-797.26	761075.63	22.69
Wind 300 deg - Service		-8227.41	-4757.89	-381700.57	659488.67	39.30
Wind 330 deg - Service		-4753.99	-8234.16	-660335.13	381179.06	45.38

Load Combinations

Comb. No.	*Description*
1	Dead Only
2	Dead+Wind 0 deg - No Ice

Comb. No.	*Description*
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice+Temp
15	Dead+Wind 0 deg+Ice+Temp
16	Dead+Wind 30 deg+Ice+Temp
17	Dead+Wind 60 deg+Ice+Temp
18	Dead+Wind 90 deg+Ice+Temp
19	Dead+Wind 120 deg+Ice+Temp
20	Dead+Wind 150 deg+Ice+Temp
21	Dead+Wind 180 deg+Ice+Temp
22	Dead+Wind 210 deg+Ice+Temp
23	Dead+Wind 240 deg+Ice+Temp
24	Dead+Wind 270 deg+Ice+Temp
25	Dead+Wind 300 deg+Ice+Temp
26	Dead+Wind 330 deg+Ice+Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service
37	Dead+Wind 300 deg - Service
38	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	*Elevation ft*	*Component Type*	*Condition*	*Gov. Load Comb.*	*Force lb*	*Major Axis Moment lb-ft*	*Minor Axis Moment lb-ft*
L1	125 - 117.721	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-4234.15	0.00	0.00
			Max. Mx	5	-2714.40	-14858.79	-0.12
			Max. My	2	-2714.33	0.09	14858.96
			Max. Vy	5	4177.05	-14858.79	-0.12
			Max. Vx	2	-4177.10	0.09	14858.96
			Max. Torque	8			-0.00
L2	117.721 - 70.7552	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-16843.05	-78.03	45.05
			Max. Mx	5	-13005.47	-395924.13	-488.17
			Max. My	2	-13005.16	467.32	396499.65
			Max. Vy	5	11128.00	-395924.13	-488.17
			Max. Vx	2	-11143.80	467.32	396499.65
			Max. Torque	7			91.08
L3	70.7552 - 26.8698	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Compression	14	-29387.63	-78.03	45.05
			Max. Mx	5	-24227.75	-954064.06	-1064.16
			Max. My	2	-24227.60	1043.07	955304.89
			Max. Vy	5	15376.96	-954064.06	-1064.16
			Max. Vx	2	-15392.71	1043.07	955304.89
			Max. Torque	7			91.07
L4	26.8698 - 1	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-44127.82	-78.03	45.05
			Max. Mx	5	-37656.50	-1540130.99	-1528.41
			Max. My	2	-37656.50	1507.29	1541907.91
			Max. Vy	5	19058.56	-1540130.99	-1528.41
			Max. Vx	2	-19074.19	1507.29	1541907.91
			Max. Torque	7			91.06

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	14	44127.82	0.00	0.00
	Max. H_x	11	37656.50	19058.56	13.54
	Max. H_z	2	37656.50	13.54	19074.19
	Max. M_x	2	1541907.91	13.54	19074.19
	Max. M_z	5	1540130.99	-19058.56	-13.54
	Max. Torsion	7	91.06	-9541.00	-16525.50
	Min. Vert	2	37656.50	13.54	19074.19
	Min. H_x	5	37656.50	-19058.56	-13.54
	Min. H_z	8	37656.50	-13.54	-19074.19
	Min. M_x	8	-1541850.19	-13.54	-19074.19
	Min. M_z	11	-1540031.02	19058.56	13.54
	Min. Torsion	13	-91.06	9541.00	16525.50

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	37656.50	0.00	0.00	-28.41	-49.21	0.00
Dead+Wind 0 deg - No Ice	37656.50	-13.54	-19074.19	-1541907.91	1507.29	78.89
Dead+Wind 30 deg - No Ice	37656.50	9517.56	-16511.96	-1334556.77	-768741.85	45.56
Dead+Wind 60 deg - No Ice	37656.50	16498.43	-9525.37	-769619.85	-1333020.69	-0.00
Dead+Wind 90 deg - No Ice	37656.50	19058.56	13.54	1528.41	-1540130.99	-45.56
Dead+Wind 120 deg - No Ice	37656.50	16511.96	9548.82	772259.31	-1334577.78	-78.89
Dead+Wind 150 deg - No Ice	37656.50	9541.00	16525.50	1336056.15	-771439.01	-91.06
Dead+Wind 180 deg - No Ice	37656.50	13.54	19074.19	1541850.19	-1607.23	-78.83
Dead+Wind 210 deg - No Ice	37656.50	-9517.56	16511.96	1334499.04	768641.90	-45.50
Dead+Wind 240 deg - No Ice	37656.50	-16498.43	9525.37	769562.13	1332920.72	-0.00
Dead+Wind 270 deg - No Ice	37656.50	-19058.56	-13.54	-1586.11	1540031.02	45.50
Dead+Wind 300 deg - No Ice	37656.50	-16511.96	-9548.82	-772317.00	1334477.82	78.83
Dead+Wind 330 deg - No Ice	37656.50	-9541.00	-16525.50	-1336113.85	771339.06	91.06
Dead+Ice+Temp	44127.82	0.00	0.00	-45.05	-78.03	0.00

Load Combination	*Vertical*	*Shear$_x$*	*Shear$_z$*	*Overturning Moment, M$_x$*	*Overturning Moment, M$_z$*	*Torque*
	lb	*lb*	*lb*	*lb-ft*	*lb-ft*	*lb-ft*
Dead+Wind 0 deg+Ice+Temp	44127.82	-10.72	-15645.49	-1310936.63	1156.36	72.86
Dead+Wind 30 deg+Ice+Temp	44127.82	7807.28	-13544.03	-1134692.65	-653741.00	42.08
Dead+Wind 60 deg+Ice+Temp	44127.82	13533.32	-7813.47	-654420.96	-1133490.35	-0.00
Dead+Wind 90 deg+Ice+Temp	44127.82	15633.12	10.72	1190.02	-1309543.16	-42.08
Dead+Wind 120 deg+Ice+Temp	44127.82	13544.03	7832.03	656469.75	-1134726.24	-72.86
Dead+Wind 150 deg+Ice+Temp	44127.82	7825.84	13554.75	1135836.58	-655881.75	-84.11
Dead+Wind 180 deg+Ice+Temp	44127.82	10.72	15645.49	1310844.64	-1315.64	-72.82
Dead+Wind 210 deg+Ice+Temp	44127.82	-7807.28	13544.03	1134600.66	653581.69	-42.04
Dead+Wind 240 deg+Ice+Temp	44127.82	-13533.32	7813.47	654328.98	1133331.03	-0.00
Dead+Wind 270 deg+Ice+Temp	44127.82	-15633.12	-10.72	-1281.98	1309383.85	42.04
Dead+Wind 300 deg+Ice+Temp	44127.82	-13544.03	-7832.03	-656561.70	1134566.94	72.82
Dead+Wind 330 deg+Ice+Temp	44127.82	-7825.84	-13554.75	-1135928.54	655722.46	84.11
Dead+Wind 0 deg - Service	37656.50	-6.74	-9504.09	-768318.79	725.97	39.31
Dead+Wind 30 deg - Service	37656.50	4742.31	-8227.41	-664999.49	-383074.96	22.70
Dead+Wind 60 deg - Service	37656.50	8220.67	-4746.21	-383501.84	-664244.67	-0.00
Dead+Wind 90 deg - Service	37656.50	9496.31	6.74	747.10	-767443.93	-22.70
Dead+Wind 120 deg - Service	37656.50	8227.41	4757.89	384788.10	-665020.60	-39.31
Dead+Wind 150 deg - Service	37656.50	4753.99	8234.16	665717.70	-384418.95	-45.38
Dead+Wind 180 deg - Service	37656.50	6.74	9504.09	768261.06	-825.95	-39.29
Dead+Wind 210 deg - Service	37656.50	-4742.31	8227.41	664941.76	382974.98	-22.68
Dead+Wind 240 deg - Service	37656.50	-8220.67	4746.21	383444.11	664144.68	-0.00
Dead+Wind 270 deg - Service	37656.50	-9496.31	-6.74	-804.82	767343.94	22.68
Dead+Wind 300 deg - Service	37656.50	-8227.41	-4757.89	-384845.82	664920.62	39.29
Dead+Wind 330 deg - Service	37656.50	-4753.99	-8234.16	-665775.42	384318.97	45.38

Maximum Tower Deflections - Service Wind

Section No.	*Elevation*	*Horz. Deflection*	*Gov. Load Comb.*	*Tilt*	*Twist*
	ft	*in*		°	°
L1	125 - 117.721	5.919	38	0.4073	0.0001
L2	121.318 - 70.7552	5.605	38	0.4059	0.0001
L3	77.2448 - 26.8698	2.282	38	0.2868	0.0000
L4	35.1302 - 1	0.450	38	0.1155	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation	*Appurtenance*	*Gov. Load Comb.*	*Deflection*	*Tilt*	*Twist*	*Radius of Curvature*
ft			*in*	°	°	*ft*
125'	EEI Band-On 12' Low Profile Platform w/12 pipe	38	5.919	0.4073	0.0001	49750
115'	EEI Band-On 12' Low Profile Platform w/12 pipe	38	5.074	0.4004	0.0001	37114
1'	RFS ATMAA1412D-1A20 Twin AWS TMA	0	0.000	0.1155	0.0000	84490

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	125 - 117.721	11.878	13	0.8174	0.0002
L2	121.318 - 70.7552	11.248	13	0.8147	0.0002
L3	77.2448 - 26.8698	4.579	13	0.5755	0.0001
L4	35.1302 - 1	0.902	13	0.2317	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
125'	EEI Band-On 12' Low Profile Platform w/12 pipe	13	11.878	0.8174	0.0002	24807
115'	EEI Band-On 12' Low Profile Platform w/12 pipe	13	10.182	0.8031	0.0002	18503
1'	RFS ATMAA1412D-1A20 Twin AWS TMA	0	0.000	0.1155	0.0000	42101

Base Plate Design Data

Plate Thickness in	Number of Anchor Bolts	Anchor Bolt Size in	Actual Allowable Ratio Bolt Tension lb	Actual Allowable Ratio Bolt Compression lb	Actual Allowable Ratio Plate Stress ksi	Actual Allowable Ratio Stiffener Stress ksi	Controlling Condition	Ratio
2.2500	12	2.2500	74000.86 131210.58 0.56	80276.95 217809.56 0.37	25.959 45.000 0.58		Plate	0.58 ✓

Compression Checks

Pole Design Data

Section No.	Elevation ft	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P lb	Allow. P_a lb	Ratio $\frac{P}{P_a}$
L1	125 - 117.721 (1)	7'3-3/8"	124'	135.2	8.166	24.5959	-4186.56	200862.00	0.021
L2	117.721 - 70.7552 (2)	50'6-23/32"	124'	92.4	17.462	53.9716	-13005.00	942445.00	0.014
L3	70.7552 - 26.8698 (3)	50'4-9/16"	124'	71.2	24.418	70.1041	-24227.50	1711820.00	0.014
L4	26.8698 - 1 (4)	34'1-9/16"	124'	60.3	27.530	96.5962	-37643.50	2659300.00	0.014

ARMOR TOWER
Armor Tower Inc.
1 North Main Street
Cortland, NY 13045
Phone: (607) 591-2318
FAX: (866) 870-0840

Job	Page
Analysis of 125' monopole	6 of 6
Project	**Date**
T-Mobile-CT11603E Atlas Container WT	17:26:38 04/22/09
Client	**Designed by**
Atlantis Group	DRH

Pole Bending Design Data

Section No.	Elevation ft	Actual M_x lb-ft	Actual f_{bx} ksi	Allow. F_{bx} ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M_y lb-ft	Actual f_{by} ksi	Allow. F_{by} ksi	Ratio $\frac{f_{by}}{F_{by}}$
L1	125 - 117.721 (1)	13744.08	-0.877	39.000	0.022	0.00	0.000	39.000	0.000
L2	117.721 - 70.7552 (2)	396769.17	-7.887	39.000	0.202	0.00	0.000	39.000	0.000
L3	70.7552 - 26.8698 (3)	955908.33	-11.242	38.218	0.294	0.00	0.000	38.218	0.000
L4	26.8698 - 1 (4)	1542775.00	-11.148	38.001	0.293	0.00	0.000	38.001	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	125 - 117.721 (1)	0.021	0.022	0.000	0.043 ✔	1.333	H1-3 ✔
L2	117.721 - 70.7552 (2)	0.014	0.202	0.000	0.216 ✔	1.333	H1-3 ✔
L3	70.7552 - 26.8698 (3)	0.014	0.294	0.000	0.308 ✔	1.333	H1-3 ✔
L4	26.8698 - 1 (4)	0.014	0.293	0.000	0.308 ✔	1.333	H1-3 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Critical Element	P lb	$SF*P_{allow}$ lb	% Capacity	Pass Fail
L1	125 - 117.721	Pole	1	-4186.56	267749.03	3.3	Pass
L2	117.721 - 70.7552	Pole	2	-13005.00	1256279.13	16.2	Pass
L3	70.7552 - 26.8698	Pole	3	-24227.50	2281855.97	23.1	Pass
L4	26.8698 - 1	Pole	4	-37643.50	3544846.75	23.1	Pass
						Summary	
					Pole (L3)	23.1	Pass
					Base Plate	43.3	Pass
					RATING =	**43.3**	**Pass**

T-Mobile

T-Mobile USA Inc.
35 Griffin Rd South, Bloomfield, CT 06002-1853
Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: Transcend
From: Farid Marbouh - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11603E
Date: May 5, 2009

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile antenna installation on a Watertank at 119 Empire Ave, Meriden, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

1) The emissions from T-Mobile transmitters are in the (1935-1944.8), (1980.2-1984.8), (2140-2145), (2110-2120)MHz frequency Band.
2) The antenna array consists of three sectors, with 2 antennas per sector.
3) The model number for GSM antenna is RR90-17-02DP.
3) The model number for UMTS antenna is APX16DWV-16DWV.
4) GSM antenna center line height is 115 ft.
4) UMTS antenna center line height is 115 ft.
5) The maximum transmit power from any GSM sector is 1763.44 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
5) The maximum transmit power from any UMTS sector is 2485.02 Watts Effective Radiated Power (EiRP) assuming 2 channels per sector.
6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
8) The average ground level of the studied area does not change significantly with respect to the transmitting location.

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile antenna installation on a Watertank at 119 Empire Ave, Meriden, CT, is 0.07845 mW/cm^2. This value represents 7.845% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm^2) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.
The combined Power Density from other carriers is 65.02%. The combined Power Density for the site is 72.865% of the M.P.E. standard.

Connecticut Market

T-Mobile

Worst Case Power Density

Site:	**CT11603E**
Site Address:	**119 Empire Ave**
Town:	**Meriden**
Tower Height:	**100 ft.**
Tower Style:	**Watertank**

GSM Data		UMTS Data	
Base Station TX output	20 W	**Base Station TX output**	40 W
Number of channels	8	**Number of channels**	2
Antenna Model	RR90-17-02DP	**Antenna Model**	APX16DWV-16DWV
Cable Size	1 5/8 in.	**Cable Size**	1 5/8 in.
Cable Length	136 ft.	**Cable Length**	136 ft.
Antenna Height	115.0 ft.	**Antenna Height**	115.0 ft.
Ground Reflection	1.6	**Ground Reflection**	1.6
Frequency	1945.0 MHz	**Frequency**	2.1 GHz
Jumper & Connector loss	4.50 dB	**Jumper & Connector loss**	1.50 dB
Antenna Gain	16.5 dBi	**Antenna Gain**	18.0 dBi
Cable Loss per foot	0.0116 dB	**Cable Loss per foot**	0.0116 dB
Total Cable Loss	1.5776 dB	**Total Cable Loss**	1.5776 dB
Total Attenuation	6.0776 dB	**Total Attenuation**	3.0776 dB
Total EIRP per Channel	53.43 dBm	**Total EIRP per Channel**	60.94 dBm
(In Watts)	220.43 W	**(In Watts)**	1242.51 W
Total EIRP per Sector	62.46 dBm	**Total EIRP per Sector**	63.95 dBm
(In Watts)	1763.44 W	**(In Watts)**	2485.02 W
nsg	10.4224	**nsg**	14.9224
Power Density (S) =	**0.032563 mW/cm^2**	**Power Density (S) =**	**0.045888 mW/cm^2**

T-Mobile Worst Case % MPE = 7.8451%

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4\pi (R)^2}$$

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Co-Location Total

Carrier	% of Standard
Verizon	8.4400 %
Cingular	12.9000 %
Sprint	7.1800 %
AT&T Wireless	9.4600 %
Nextel	27.0400 %
MetroPCS	
Other Antenna Systems	
Total Excluding T-Mobile	**65.0200 %**
T-Mobile	7.8451
Total % MPE for Site	**72.8651%**