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

October 18, 2010

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-057-100929** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 363 Riversville Road, Greenwich, Connecticut.

Dear Attorney Baldwin:

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 with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated September 29, 2010. 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. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts

Linda Roberts
Executive Director

LR/CDM/laf

c: The Honorable Peter J. Tesei, First Selectman, Town of Greenwich
Diane Fox, Planning & Zoning Director, Town of Greenwich
Christopher B. Fisher, Esq., Cuddy & Feder LLP

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Internet: ct.gov/csc

Daniel F. Caruso
Chairman

October 5, 2010

The Honorable Peter J. Tesei
First Selectman
Town of Greenwich
Town Hall
101 Field Point Road
P. O. Box 2540
Greenwich, CT 06836-2540

RE: **EM-VER-057-100929** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 363 Riversville Road, Greenwich, Connecticut.

Dear First Selectman Tesei:

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 October 19, 2010.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts

Linda Roberts
Executive Director

LR/jbw

Enclosure: Notice of Intent

c: Diane Fox, Planning & Zoning Director, Town of Greenwich

ROBINSON & COLE

EM-VER-057-100929

KENNETH C. BALDWIN

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September 29, 2010

Via Hand Delivery

Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Antenna Swap**
363 Riversville Road, Greenwich, Connecticut

Dear Ms. Roberts:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains wireless telecommunications antennas at the 140-foot level on the existing 160-foot tower at the above-referenced address. The tower is owned by AT&T. The Council approved Cellco's shared use of the existing tower in 1994. Cellco now intends to modify its installation by replacing six (6) of its PCS antennas with three (3) model MG D3-800T0 PCS antennas and three (3) model P65-16-XL-2 LTE antennas, all at the same 140-foot level on the tower. Attached behind Tab 1 are the specifications for the proposed replacement antennas.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Peter J. Tesei, First Selectman of the Town of Greenwich. A copy of this letter is also being sent to The Greenwich Council, Boy Scouts of America, Inc., the owner of the property on which the tower is located.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in any increase in the overall height of the existing tower. Cellco's antennas will be located at the same 140-foot level on the existing 160-foot tower.

2. The proposed modifications will not involve any modifications to ground-mounted equipment and, therefore, will not require the extension of the site boundaries.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The operation of the replacement antennas will not increase radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. A cumulative power density table for Cellco's modified facility is included behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower and foundation can support Cellco's proposed antennas modification. (See Tab 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Peter J. Tesei, Greenwich First Selectman
The Greenwich Council, Boy Scouts of America, Inc.
Sandy M. Carter

RYMSA WIRELESS

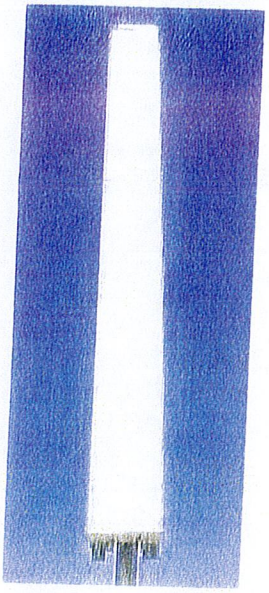
1710-2170 MHz

Model # MG D3-800TX

XPol GSM1800+PCS & UMTS Panel Antenna

Beamwidth: H 65º/V 6.5º
Gain: 16.15 dBd/18.25 dBi
Length: 52.7 in

Electrical Specifications			
Antenna model	MG D3-800TX		
Frequency range (MHz)	1710-1880	1850-1990	1920-2170
Impedance	50 ohms		
VSWR	1.4		
Polarization	±45º		
Isolation between ports (dB)	30		
Average gain (dBd/dBi)	15.7/17.8	15.9/18	16.15/18.25
Horizontal beamwidth (deg)	65º±5º		
Vertical beamwidth (deg)	6.5º±0.5º	6.3º±0.5º	6.3º±0.5º
Electrical tilt (deg)	Fixed 0º-14º		
Upper sidelobe suppression (dB)	18		
Front-to-back ratio (db) @180º±30º	30		
Polarization isolation (dB) @3 dB beamwidth	20		
Maximum power per input (w)	250		
Intermodulation products (dBc)	-150		
Connectors	2 X 7/16 female		
Connector position	Antenna bottom		



Mechanical & Environmental Specifications	
Dimensions in (mm)	52.7 x 6.3 x 3.5 (1380 x 160 x 90)
Survival wind speed mph (kph)	124 (200)
Front windload lbs (N) @100 mph/160 kph	74 (335)
Lateral windload lbs (N) @100 mph/160 kph	42 (188)
Antenna weight lbs (kg)	15 (7)
Clamps weight lbs (kg)	7.7 (3.5)
Mast mounting in (cm)	2.0 to 5.3 (50 to 135)
Radome color	Gray
Grounding	All metallic parts DC grounded
Temperature range F (ºC)	-67º to 140º (-55 to +60º)
Humidity	100%

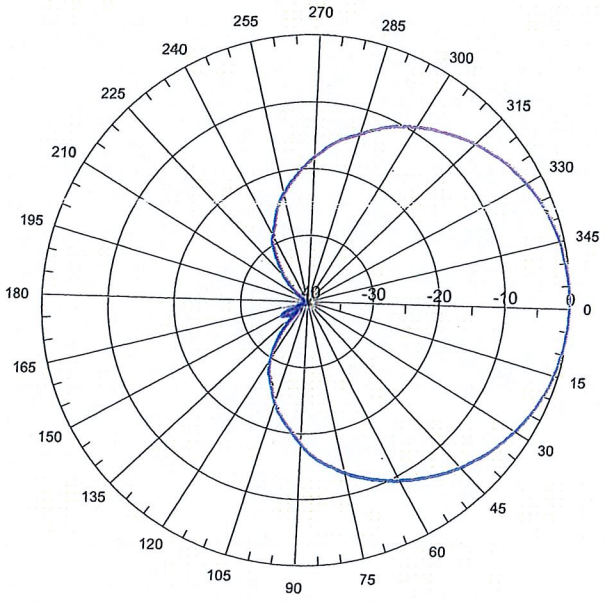
Shipping Specifications	
Dimensions in (mm)	64 x 8.8 x 6.9 (1630 x 225 x 175)
Weight lbs (kg)	27 (12.5)
Material	Cardboard and foam

1710-2170 MHz

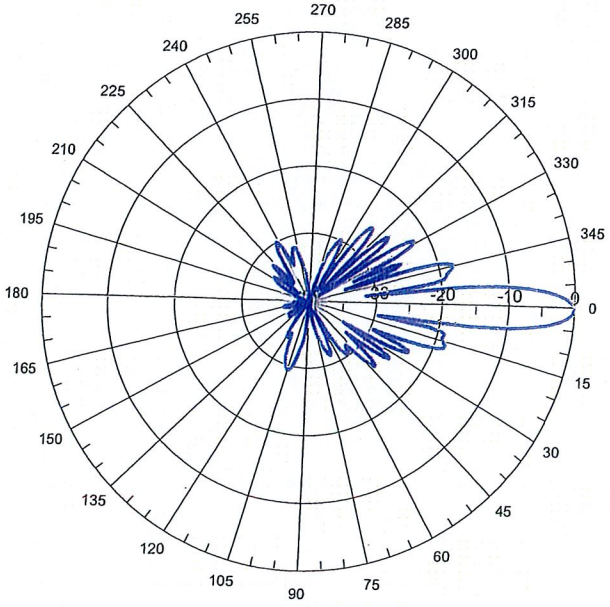
Model # MG D3-800TX

XPol GSM1800+PCS & UMTS Panel Antenna

H plane



E plane



P65-16-XL-2 Very Low Broadband Antennas

POLARIZATION: Dual linear ±45°
FREQUENCY (MHz): 698-894
HORIZONTAL BEAM WIDTH (°): 65
GAIN (dBi/dBd): 16.0/13.9
TILT: 2
LENGTH: 72"

ELECTRICAL SPECIFICATIONS*

Frequency range (MHz)		698-894	
Frequency band (MHz)	698-806		806-894
Gain (dBi/dBd)	15.5/13.4		16.0/13.9
Polarization			
Nominal Impedance (Ω)			
VSWR			
Horizontal beam width, -3 dB (°)	68		65
Vertical beam width, -3 dB (°)	10.5		9.5
Electrical down tilt (°)			
Side lobe suppression, vertical 1st upper (dB)	> 15		> 15
Isolation between inputs (dB)	> 30		> 30
Tracking, horizontal plane ±60° (dB)	< 2		< 2
First null fill (dB)	-		-
Vertical beam squint (°)	< 0.5		< 0.5
Front to back ratio (dB)	> 30		> 30
Front to back ratio, total power (dB)	> 25		> 25
Cross polar discrimination (XPD) 0° (dB)	> 15	> 15	
Cross polar discrimination (XPD) ±60° (dB)	> 10		> 10
Far field coupling			
IM3, 2xTx@43dBm (dBc)	-153		
IM7, 2xTx@43dBm (dBc)			
Power handling, average per input (W)			
Power handling, average total (W)			

MECHANICAL SPECIFICATIONS*

Connector	2 X 7/16 DIN Female
Connector position	Bottom
Dimensions, HxWxD, mm (ft)	72" x 12" x 5" (1829 x 305 x 125)
Mounting	Pre-mounted Tilt Brackets
Weight, with brackets, kg (lbs)	44 (20)
Weight, without brackets, kg (lbs)	33 (15)
Wind load, frontal/lateral/rear side 42 m/s Cd=1.6 (N)	1380
Maximum operational wind speed, m/s (mph)	100 (45)
Survival wind speed, m/s (mph)	125 (55)
Lightning protection	DC Ground
Radome material	PVC
Radome colour	Light Grey
Package size, HxWxD, mm (ft)	82" x 16" x 10" (2082 x 400 x 255)
Shipping weight, kg (lbs)	55 (25)
RET	N/A
Brackets	7256.00, 7454.00, 2210.00

*All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

ANTENNA PATTERNS*

For detailed patterns visit http://www.powerwave.com/rpa/.

	General	Power	Density					
Site Name: West Greenwich								
Tower Height: Verizon @ 140Ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*SNET/Cingular	6	100	150	0.0096	850	0.5667	1.69%	
*Cingular GSM	3	296	156	0.0131	880	0.5867	2.24%	
*Cingular GSM	1	427	156	0.0063	1930	1.0000	0.63%	
*T-Mobile GSM	8	118	163	0.0128	1945	1.0000	1.28%	
*T-Mobile UMTS	2	665	163	0.0180	2100	1.0000	1.80%	
*Nextel	9	100	130	0.0191	851	0.5673	3.38%	
*Sprint	11	122	120	0.0335	1962.5	1.0000	3.35%	
Verizon	**3**	**313**	**140**	**0.0172**	**1970**	**1.0000**	**1.72%**	
Verizon	**9**	**246**	**140**	**0.0406**	**869**	**0.5793**	**7.01%**	
Verizon	**1**	**673**	**140**	**0.0123**	**757**	**0.4973**	**2.48%**	
								25.58%
* Source: Siting Council								

at&t
Glynn Walker
AT&T Mobility
5405 Windward Pkwy
Alpharetta, GA 30004
(770) 708-6122

GPD ASSOCIATES
Kevin Clements
520 South Main St., Suite 2531
Akron, OH 44311
(330) 572-2195
kclements@gpdgroup.com

GPD# 2010260.77
January 15, 2010

STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	Site USID:	26225
	Site FA:	10034990
	Site Name:	GREENWICH NORTH
VERIZON DESIGNATION:	Site Name:	West Greenwich
	Site Number:	BRG 2051
ANALYSIS CRITERIA:		TIA/EIA-222-F & 2003 IBC 85-mph with 0" ice 74-mph with 1/2" ice
SITE DATA:		363 Riversville Road, Greenwich, CT 06831, Fairfield County Latitude 41° 3' 59.58" N, Longitude 73° 40' 17.111" W 160' Monopole

Mr. Walker,

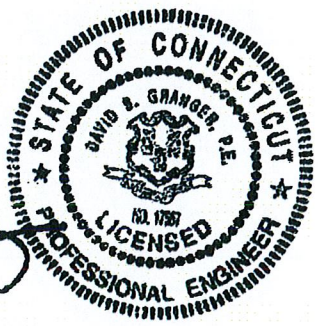
GPD is pleased to submit this Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the addition of the following proposed loading configuration:

Elev. 140' (3) Powerwave P6516XL-2 Antennas on an existing 13' LP Platform, w/ (6) existing 1-5/8" internal coax
(3) Rymsa MG D3-800TO Antennas on the same mount, w/ (6) 1-5/8" internal coax

Based on our analysis we have determined the design of the **tower and its foundation are sufficient** for the proposed, existing, and reserved loadings as referenced in Appendix A.

We at GPD appreciate the opportunity of providing our continuing professional services to you and AT&T. If you have any questions please do not hesitate to call.

Respectfully submitted,



David B. Granger, P.E.
Connecticut #: 17557

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by Verizon to AT&T. This report was commissioned by Mr. Glynn Walker of AT&T.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Monopole	60.5%	Pass
Base Plate	57.8%	Pass
Anchor Rods	52.0%	Pass
Flange Plate @ 152'	8.0%	Pass
Flange Bolts @ 152'	8.7%	Pass
Foundation	47.7%	Pass

ANALYSIS METHOD

RISA Tower (Version 5.3.1.0), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information.

DOCUMENTS PROVIDED

Document	Remarks	Source
Preliminary Tower Summary	Verizon Co-location document	Siterra
Site Lease Application	Verizon Application, dated 12/1/09	Siterra
Tower Mapping	GPD & MTSI Northeast, dated 2/18/09	Siterra
Previous Analysis	GPD Project #: 2009268.09 Rev. 1, dated 10/23/09	Siterra
Original Tower Drawings	EEI Project #: 5590, dated 4/10/03	Siterra
Geotechnical Report	WEI Project #: 2009-895, dated 9/4/09	Siterra
Foundation Investigation	WEI Project #: 2009-895, dated 9/4/09	Siterra

ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the monopole. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The monopole shaft sizes and shape are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations. If no data is available, the foundation system is not verified. In the case of absent foundation data, it is the tower owner's responsibility to insure that the foundation system is adequate to support the structure with its new reactions.
6. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
7. All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report.
8. Tower Mounted Amplifiers are assumed to be installed behind antennas.
9. All existing loading was obtained from a previous analysis by GPD Associates Project #: 2009268.09 Rev. 1, dated 10/23/09, the provided Preliminary Tower Summary, tower photos, and a tower mapping done by GPD Associates & MTSI Northeast dated, 2/18/09 and is assumed to be accurate.
10. All proposed coax is assumed to be internal to the monopole

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Associates should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD ASSOCIATES has performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD ASSOCIATES in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

GPD ASSOCIATES does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD ASSOCIATES provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD ASSOCIATES, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

GPD ASSOCIATES makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD ASSOCIATES will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD ASSOCIATES pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

Tower Analysis Summary Form

General Info

Site Name	GREENWICH NORTH
Site Number	26225
FA Number	10034990
Date of Analysis	1/15/2010
Company Performing Analysis	GPD

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	MP	
Tower Height (top of steel AGL)	160'	
Tower Manufacturer	EEI	
Tower Model	n/a	
Tower Design	EEI Project #: 5590	4/10/2003
Foundation Design	n/a	
Geotech Report	WEI Project #: 2009-895	9/4/2009
Tower Mapping	GPD Associates & MTSI Northeast	2/18/2009
Previous Structual Analysis	GPD Associates project #: 2009268.09 Rev. 1	10/23/2009
Foundation Mapping	WEI Project #: 2009-895	9/4/2009

Design Parameters

Design Code Used	TIA/EIA-222-F
Location of Tower (County, State)	Fairfield, Conecticut
Basic Wind Speed (mph)	85-fastest
Ice Thickness (in)	0.5"
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower	60.5%
Foundation	47.7%
Guy Wire	n/a

Steel Yield Strength (ksi)

Pole	65
Base Plate	60
Anchor Rods	75

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Internal / External
T-Mobile	160	163	6	Panel	EMS	RR90-17-02DP	40,185,310	1	Unknown	13' LP Platform	12	Unknown	1-5/8"	Internal
T-Mobile	160	163	6	TMA	Communication Components	DTMA-1819-DD-12	40,185,310			on same mount				
T-Mobile	160	163	3	Panel	RFS	APX16DWV-16DWVS-A21	100,220,330			on same mount	6	LDF7-50A	1-5/8"	Internal
T-Mobile	160	163	3	TMA	RFS	ATMAA1412D-1A20	100,220,330			on same mount				
AT&T Mobility	148	154	6	Panel	Powerwave	7770.00	30,150,270	1	Unknown	13' LP Platform	12	Unknown	1-5/8"	Internal
AT&T Mobility	148	154	12	TMA	Powerwave	LGP 21401	30,150,270			on same mount				
Verizon	141.5	141.5	6	Panel	Decibel	DB844H80E-XY	20,140,260	1	Unknown	13' LP Platform	12	Unknown	1-5/8"	Internal
Verizon	141.5	141.5	6	Panel	Antel	LPA-1850801/12CF	20,140,260			on same mount	1	Unknown	1-1/4"	Internal
Nextel	131	131	12	Panel	Decibel	DB4H9E	20,140,260	1	Unknown	13' LP Platform	12	Unknown	1-1/4"	Internal
Nextel	131	131									3	Unknown	1/2"	Internal
Sprint	122	122	6	Panel	Decibel	DB980F90E-M		1	Unknown	13' LP Platform	6	Unknown	1-5/8"	Internal
Sprint	72	73	1	Panel	Unknown	GPS	110	1	Unknown	4' Standoff	1	Unknown	1/2"	Internal

Note: The existing (6) Antel antennas at 141.5' shall be removed before the installation of the proposed loading. The existing coax shall be reused. It is assumed the unused 1-1/4" coax will be removed.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Internal / External
Verizon	141.5	140	3	Panel	Powerwave	P6516XL-2	40,155,275			on existing mount	6	LDF7-50A	1-5/8"	Internal
Verizon	141.5	140	3	Panel	Rymsa	MG D3-800TO	40,155,275			on existing mount				

Note: The proposed loading is in additiona to the existing/reserved at that elevation.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Internal / External

Revision:3
Date: 2/18/09

APPENDIX B

RISA Tower Output File

Tower Input Data

There is a pole section.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in Fairfield County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 74 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

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
LDF7-50A (1-5/8 FOAM)	B	No	Inside Pole	141.50 - 4.00	18	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	122.00 - 4.00	6	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF4P-50A (1/2 FOAM)	C	No	Inside Pole	72.00 - 4.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	160.00 - 4.00	18	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	154.00 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF6-50A (1-1/4 FOAM)	A	No	Inside Pole	131.00 - 12.00	12	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
LDF4P-50A (1/2 FOAM)	A	No	Inside Pole	131.00 - 12.00	3	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
GPS	B	From Face	2.57 3.06 1.00	50.0000	72.00	No Ice 1/2" Ice	0.17 0.24	0.17 0.24	0.00 0.00
4' Standoff	B	From Face	1.29 1.53 0.00	50.0000	72.00	No Ice 1/2" Ice	3.41 4.47	3.41 4.47	0.08 0.10
(2) DB980F90E-M w/Mount	A	From	4.00	0.0000	122.00	No Ice	4.37	3.95	0.03

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Pipe		Centroid-Leg	0.00 0.00			1/2" Ice	4.96	5.04	0.07
(2) DB980F90E-M w/Mount Pipe	B	From Centroid-Leg	4.00 0.00 0.00	0.0000	122.00	No Ice 1/2" Ice	4.37 4.96	3.95 5.04	0.03 0.07
(2) DB980F90E-M w/Mount Pipe	C	From Centroid-Leg	4.00 0.00 0.00	0.0000	122.00	No Ice 1/2" Ice	4.37 4.96	3.95 5.04	0.03 0.07
Valmont 13' Platform w/o rails (GPD)	C	None		0.0000	122.00	No Ice 1/2" Ice	24.80 26.20	24.80 26.20	1.50 2.50
(4) 4' x 6" Panel	A	From Centroid-Leg	3.76 1.37 0.00	20.0000	131.00	No Ice 1/2" Ice	2.87 3.18	0.67 1.13	0.02 0.03
(4) 4' x 6" Panel	B	From Centroid-Leg	3.76 1.37 0.00	20.0000	131.00	No Ice 1/2" Ice	2.87 3.18	0.67 1.13	0.02 0.03
(4) 4' x 6" Panel	C	From Centroid-Leg	3.76 1.37 0.00	20.0000	131.00	No Ice 1/2" Ice	2.87 3.18	0.67 1.13	0.02 0.03
Valmont 13' Platform w/o rails (GPD)	C	None		0.0000	131.00	No Ice 1/2" Ice	24.80 26.20	24.80 26.20	1.50 2.50
(2) DB844H80E-XY w/Mount Pipe	A	From Centroid-Leg	3.76 1.37 0.00	20.0000	141.50	No Ice 1/2" Ice	3.58 4.20	5.63 6.73	0.04 0.08
(2) DB844H80E-XY w/Mount Pipe	B	From Centroid-Leg	3.76 1.37 0.00	20.0000	141.50	No Ice 1/2" Ice	3.58 4.20	5.63 6.73	0.04 0.08
(2) DB844H80E-XY w/Mount Pipe	C	From Centroid-Leg	3.76 1.37 0.00	20.0000	141.50	No Ice 1/2" Ice	3.58 4.20	5.63 6.73	0.04 0.08
P6516XL-2 w/ Mount Pipe	A	From Centroid-Leg	3.76 1.37 0.00	20.0000	140.00	No Ice 1/2" Ice	8.74 9.35	6.52 7.39	0.09 0.16
MG D3-800TO w/ Mount Pipe	A	From Centroid-Leg	3.76 1.37 0.00	20.0000	140.00	No Ice 1/2" Ice	3.59 3.98	3.74 4.38	0.06 0.10
P6516XL-2 w/ Mount Pipe	B	From Centroid-Leg	3.76 1.37 0.00	20.0000	140.00	No Ice 1/2" Ice	8.74 9.35	6.52 7.39	0.09 0.16
MG D3-800TO w/ Mount Pipe	B	From Centroid-Leg	3.76 1.37 0.00	20.0000	140.00	No Ice 1/2" Ice	3.59 3.98	3.74 4.38	0.06 0.10
P6516XL-2 w/ Mount Pipe	C	From Centroid-Leg	3.76 1.37 0.00	20.0000	140.00	No Ice 1/2" Ice	8.74 9.35	6.52 7.39	0.09 0.16
MG D3-800TO w/ Mount Pipe	C	From Centroid-Leg	3.76 1.37 0.00	20.0000	140.00	No Ice 1/2" Ice	3.59 3.98	3.74 4.38	0.06 0.10
Valmont 13' Platform w/o rails (GPD)	C	None		0.0000	141.50	No Ice 1/2" Ice	24.80 26.20	24.80 26.20	1.50 2.50
(2) RA21.7770.00 w/Mount Pipe	A	From Centroid-Leg	3.46 2.00 6.00	30.0000	148.00	No Ice 1/2" Ice	6.46 7.14	4.59 5.66	0.06 0.10
(2) RA21.7770.00 w/Mount Pipe	B	From Centroid-Leg	3.46 2.00 6.00	30.0000	148.00	No Ice 1/2" Ice	6.46 7.14	4.59 5.66	0.06 0.10
(2) RA21.7770.00 w/Mount	C	From	3.46	30.0000	148.00	No Ice	6.46	4.59	0.06

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
Pipe		Centroid-Leg	2.00 6.00			1/2" Ice	7.14	5.66	0.10
(4) LGP21401	A	From Centroid-Leg	3.46 2.00 6.00	30.0000	148.00	No Ice 1/2" Ice	1.29 1.45	0.23 0.31	0.01 0.02
(4) LGP21401	B	From Centroid-Leg	3.46 2.00 6.00	30.0000	148.00	No Ice 1/2" Ice	1.29 1.45	0.23 0.31	0.01 0.02
(4) LGP21401	C	From Centroid-Leg	3.46 2.00 6.00	30.0000	148.00	No Ice 1/2" Ice	1.29 1.45	0.23 0.31	0.01 0.02
Valmont 13' Platform w/o rails (GPD)	C	None		0.0000	148.00	No Ice 1/2" Ice	24.80 26.20	24.80 26.20	1.50 2.50
(2) RR90-17-02DP	A	From Centroid-Leg	4.00 0.00 3.00	30.0000	160.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	0.01 0.04
(2) RR90-17-02DP	C	From Centroid-Face	4.00 0.00 3.00	5.0000	160.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	0.01 0.04
(2) RR90-17-02DP	A	From Centroid-Face	4.00 0.00 3.00	0.0000	160.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	0.01 0.04
(2) DTMA-1819-DD-12	A	From Centroid-Leg	4.00 0.00 3.00	30.0000	160.00	No Ice 1/2" Ice	0.00 0.00	0.41 0.52	0.01 0.02
(2) DTMA-1819-DD-12	C	From Centroid-Face	4.00 0.00 3.00	5.0000	160.00	No Ice 1/2" Ice	0.00 0.00	0.41 0.52	0.01 0.02
(2) DTMA-1819-DD-12	A	From Centroid-Face	4.00 0.00 3.00	0.0000	160.00	No Ice 1/2" Ice	0.00 0.00	0.41 0.52	0.01 0.02
APX16DWV-16DWVS-C	B	From Centroid-Face	4.00 0.00 3.00	40.0000	160.00	No Ice 1/2" Ice	9.30 9.80	4.77 5.24	0.06 0.11
APX16DWV-16DWVS-C	C	From Centroid-Face	4.00 0.00 3.00	40.0000	160.00	No Ice 1/2" Ice	9.30 9.80	4.77 5.24	0.06 0.11
APX16DWV-16DWVS-C	A	From Centroid-Face	4.00 0.00 3.00	30.0000	160.00	No Ice 1/2" Ice	9.30 9.80	4.77 5.24	0.06 0.11
ATMAA1412D-1A20	B	From Centroid-Face	4.00 0.00 3.00	40.0000	160.00	No Ice 1/2" Ice	0.00 0.00	0.47 0.57	0.01 0.02
ATMAA1412D-1A20	C	From Centroid-Face	4.00 0.00 3.00	40.0000	160.00	No Ice 1/2" Ice	0.00 0.00	0.47 0.57	0.01 0.02
ATMAA1412D-1A20	A	From Centroid-Face	4.00 0.00 3.00	30.0000	160.00	No Ice 1/2" Ice	0.00 0.00	0.47 0.57	0.01 0.02
Valmont 13' Platform w/o rails (GPD)	C	None		0.0000	160.00	No Ice 1/2" Ice	24.80 26.20	24.80 26.20	1.50 2.50

Critical Deflections and Radius of Curvature - Service Wind

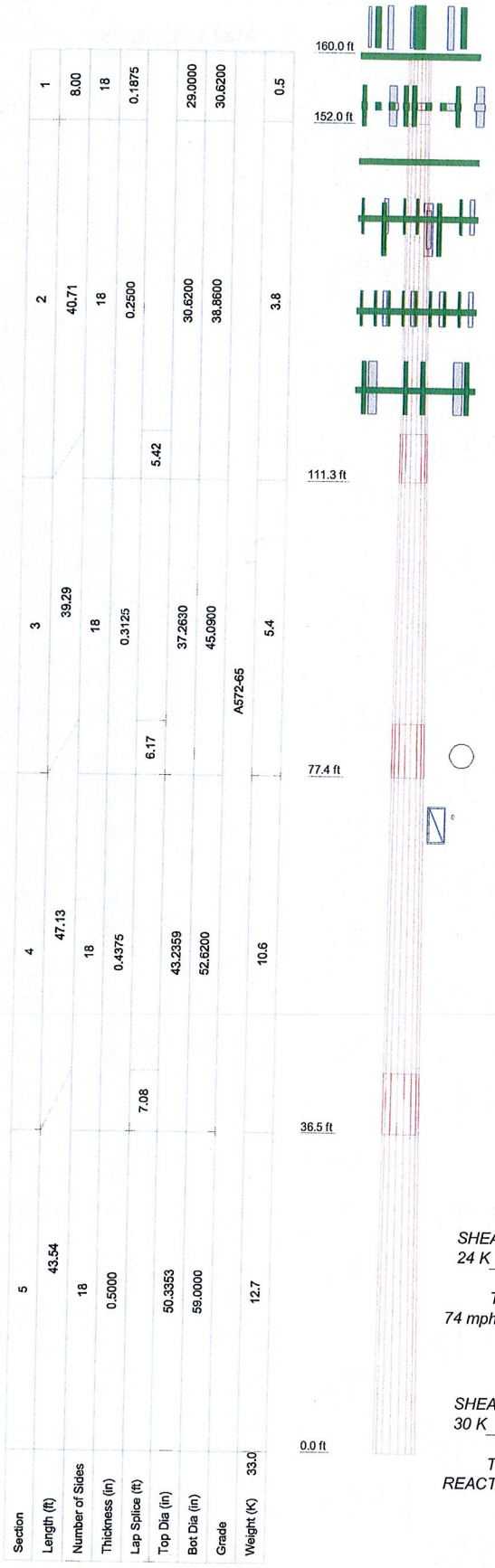
Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
160.00	(2) RR90-17-02DP	27	22.240	1.1877	0.0028	58124
148.00	(2) RA21.7770.00 w/Mount Pipe	27	19.271	1.1705	0.0020	24210
141.50	(2) DB844H80E-XY w/Mount Pipe	27	17.687	1.1485	0.0016	15699
140.00	P6516XL-2 w/ Mount Pipe	27	17.326	1.1421	0.0016	14521
131.00	(4) 4' x 6" Panel	27	15.203	1.0952	0.0012	10013
122.00	(2) DB980F90E-M w/Mount Pipe	27	13.176	1.0349	0.0010	7640
72.00	GPS	27	4.485	0.5670	0.0003	6197

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	160 - 152	Pole	TP30.62x29x0.1875	1	-2.21	908.48	6.7	Pass
L2	152 - 111.29	Pole	TP38.86x30.62x0.25	2	-13.75	1547.47	42.9	Pass
L3	111.29 - 77.42	Pole	TP45.09x37.263x0.3125	3	-20.67	2245.56	60.5	Pass
L4	77.42 - 36.46	Pole	TP52.62x43.2359x0.4375	4	-32.95	3665.31	58.0	Pass
L5	36.46 - 0	Pole	TP59x50.3353x0.5	5	-49.85	4826.45	59.9	Pass
							Summary	
						Pole (L3)	60.5	Pass
						RATING =	**60.5**	**Pass**

APPENDIX C

Tower Elevation Drawing



Section	1	2	3	4	5
Length (ft)	8.00	40.71	39.29	47.13	43.54
Number of Sides	18	18	18	18	18
Thickness (in)	0.1875	0.2500	0.3125	0.4375	0.5000
Lap Splice (ft)		5.42	6.17	7.08	
Top Dia (in)	29.0000	30.6200	37.2630	43.2359	50.3353
Bot Dia (in)	30.6200	38.8600	45.0900	52.6200	59.0000
Grade			A572-65		
Weight (K)	0.5	3.8	5.4	10.6	12.7

33.0

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) RR90-17-02DP	160	Valmont 13' Platform w/o rails (GPD)	141.5
(2) RR90-17-02DP	160	(2) DB844H80E-XY w/Mount Pipe	141.5
(2) RR90-17-02DP	160	(2) DB844H80E-XY w/Mount Pipe	141.5
(2) DTMA-1819-DD-12	160	(2) DB844H80E-XY w/Mount Pipe	141.5
(2) DTMA-1819-DD-12	160	P6516XL-2 w/ Mount Pipe	140
(2) DTMA-1819-DD-12	160	MG D3-800TO w/ Mount Pipe	140
APX16DWV-16DWVS-C	160	P6516XL-2 w/ Mount Pipe	140
APX16DWV-16DWVS-C	160	MG D3-800TO w/ Mount Pipe	140
APX16DWV-16DWVS-C	160	P6516XL-2 w/ Mount Pipe	140
ATMAA1412D-1A20	160	MG D3-800TO w/ Mount Pipe	140
ATMAA1412D-1A20	160	(4) 4' x 6" Panel	131
ATMAA1412D-1A20	160	(4) 4' x 6" Panel	131
Valmont 13' Platform w/o rails (GPD)	160	(4) 4' x 6" Panel	131
(2) RA21.7770.00 w/Mount Pipe	148	Valmont 13' Platform w/o rails (GPD)	131
(2) RA21.7770.00 w/Mount Pipe	148	(2) DB980F90E-M w/Mount Pipe	122
(2) RA21.7770.00 w/Mount Pipe	148	Valmont 13' Platform w/o rails (GPD)	122
(4) LGP21401	148	(2) DB980F90E-M w/Mount Pipe	122
(4) LGP21401	148	(2) DB980F90E-M w/Mount Pipe	122
(4) LGP21401	148	4' Standoff	72
Valmont 13' Platform w/o rails (GPD)	148	GPS	72

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Fairfield 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 50 mph wind.
5. TOWER RATING: 60.5%

GPD GROUP
Consulting Engineers

GPD Associates
520 South Main Street, Suite 2531
Akron, OH 44311
Phone: (330) 572-2100
FAX: (330) 572-2102

Job: **26225 GREENWICH NORTH**			
Project: **2010260.77**			
Client: AT&T Mobility	Drawn by: rosterhaus	App'd:	
Code: TIA/EIA-222-F	Date: 01/15/10	Scale: NTS	
Path: N:\2010\2010260\77\RISA\26225 Greenwich North.eri		Dwg No. E-1	

APPENDIX D

Base Plate & Anchor Rod Analysis

GPD ASSOCIATES

Anchor Rod and Base Plate Stresses
26225 GREENWICH NORTH
GPD Project Number: 2010260.77

Overturning Moment =	3413.72	k*ft
Axial Force =	48.85	k
Shear Force =	29.97	k

Anchor Rods		
Number of Rods =	24	
Type =	Upset Rod	
Rod Yield Strength (Fy) =	75	ksi
ASIF =	1.333	
Rod Circle =	66	in
Rod Diameter =	2.25	in
Net Tensile Area =	3.25	in^2
Max Tension on Rod =	101.35	kips
Max Compression on Rod =	105.42	kips
Allow. Rod Force =	195.00	kips
Anchor Rod Capacity =	52.0%	OK

Stiffeners		
Configuration =	None	

Base Plate		
Location =	External	
Plate Strength (F_y) =	60	ksi
Outside Diameter =	73	in
Plate Thickness =	2.25	in
wcalc =	29.58	in
wmax =	47.76	in
w =	29.58	in
S =	24.96	in^3
fb =	34.68	ksi
Fb =	60	ksi
Base Plate Capacity =	57.8%	OK

Pole		
Pole Diameter =	59	in
Number of Sides =	18	
Thickness =	0.5	in
Pole Yield Strength =	65	ksi

APPENDIX E

Flange Analysis

GPD ASSOCIATES

Existing Flange Connection @ 152'
26225 GREENWICH NORTH
GPD Project Number: 2010260.77

O.T. Moment =	36.84	k*ft
Axial =	2.21	kips
Shear =	4.13	kips

Flange Bolts		
# Bolts =	12	
Bolt Type =	A325	
F_t =	44	ksi
ASIF =	1.333	
Bolt Circle =	35	in
Bolt Diameter =	1	in
Tension & Shear (ASD, Section J3.5)		
F_v =	21	ksi
Nominal Area =	0.79	in^2
f_v =	0.44	ksi
Applied Shear =	0.34	kips
Allowable Shear =	21.99	kips
Ft^2 - 4.39(fv^2))^1/2 =	43.99	ksi
Allowable Bolt Stress =	58.65389	ksi
B =	46.07	kips
Prying Action Check		
N/A, top flange thickness > tc		
Max Comp. on Bolt =	4.39	kips
Max Tension on Bolt =	4.02	kips
Shear Capacity =	1.6%	
Tensile Capacity =	8.7%	
Bolt Capacity =	8.7%	OK

Pole Information		
Shaft Diam. (Upper) =	30.62	in
Thickness (Upper)=	0.1875	in
# of Sides (Upper) =	18	
F_y (Upper) =	65	ksi
Shaft Diam. (Lower) =	30.62	in
Thickness (Lower)=	0.25	in
# of Sides (Lower) =	18	
F_y (Lower) =	65	ksi

Upper Flange Plate		
Location =	External	
Plate Strength (F_y) =	60	ksi
Plate Thickness =	1	in
Outer Diameter =	38	in
wcalc =	16.95	in
wmax =	19.06	in
w =	16.95	in
S =	2.83	in^3
f_b =	4.79	ksi
F_b =	60	ksi
Upper Plate Capacity =	8.0%	OK

UpperStiffeners	
Configuration =	None

Lower Flange Plate		
Location =	External	
Plate Strength (F_y) =	60	ksi
Plate Thickness =	1	in
Outer Diameter =	38	in
wcalc =	16.95	in
wmax =	19.06	in
w =	16.95	in
S =	2.83	in^3
f_b =	4.79	ksi
F_b =	60	ksi
Lower Plate Capacity =	8.0%	OK

Lower Stiffeners	
Configuration =	None

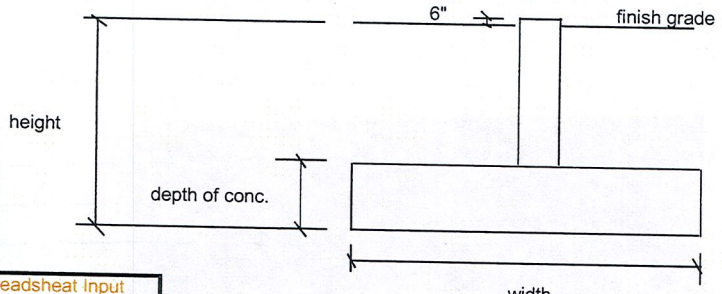
APPENDIX F

Foundation Calculations

PAD DESIGN - Monopole

TOWER REACTIONS

total overturning moment =	3413.72	Kip-ft
total shear =	29.97	Kip
axial =	49.85	Kip
ground water table =	Below	ft



Spreadsheat Input
PCAMATS Input

PAD DIMENSIONS

width =	25	ft
height =	9.5	ft
depth of conc =	4.5	ft
γ_{soil} =	0.120	kcf
γ_{conc} =	0.150	kcf

Mr =	11687.43	k-ft
Mot =	3713.42	k-ft
P =	846.725	k
w_{wedge}	21.65	k
Allowable Bearing =	10	ksf

F.S. OVERTURNING = 3.14734869 ok > 1.5

F.S. OVERTURNING / F.S. ALLOWABLE
47.7%

LOAD PERPENDICULAR TO PAD

Q_{MAX} = P/A+M/S=	2.455	
Q_{MIN} = P/A-M/S=	0	

LOAD AT 45 DEGREES TO PAD

Q_{MAX} = P/A+M/S=	3.242	
Q_{MIN} = P/A-M/S=	0	

width/6	M/P	
4.17	4.39	NG (width/6 < M/P), use Qmax

Verify max pressure in PCAMATS for this load case

IF M/P>width/6

Qmax =	2.783	ksf
Qmin =	0.000	ksf

Q_{MAX}/Q_{ALL} 27.8% OK

Mx =	2625.785
My =	2625.785
e_X =	3.101
ey =	3.101
e_X/W =	0.124 ok (e/W < 1/6)
e_Y/W =	0.124 ok (e/W < 1/6)

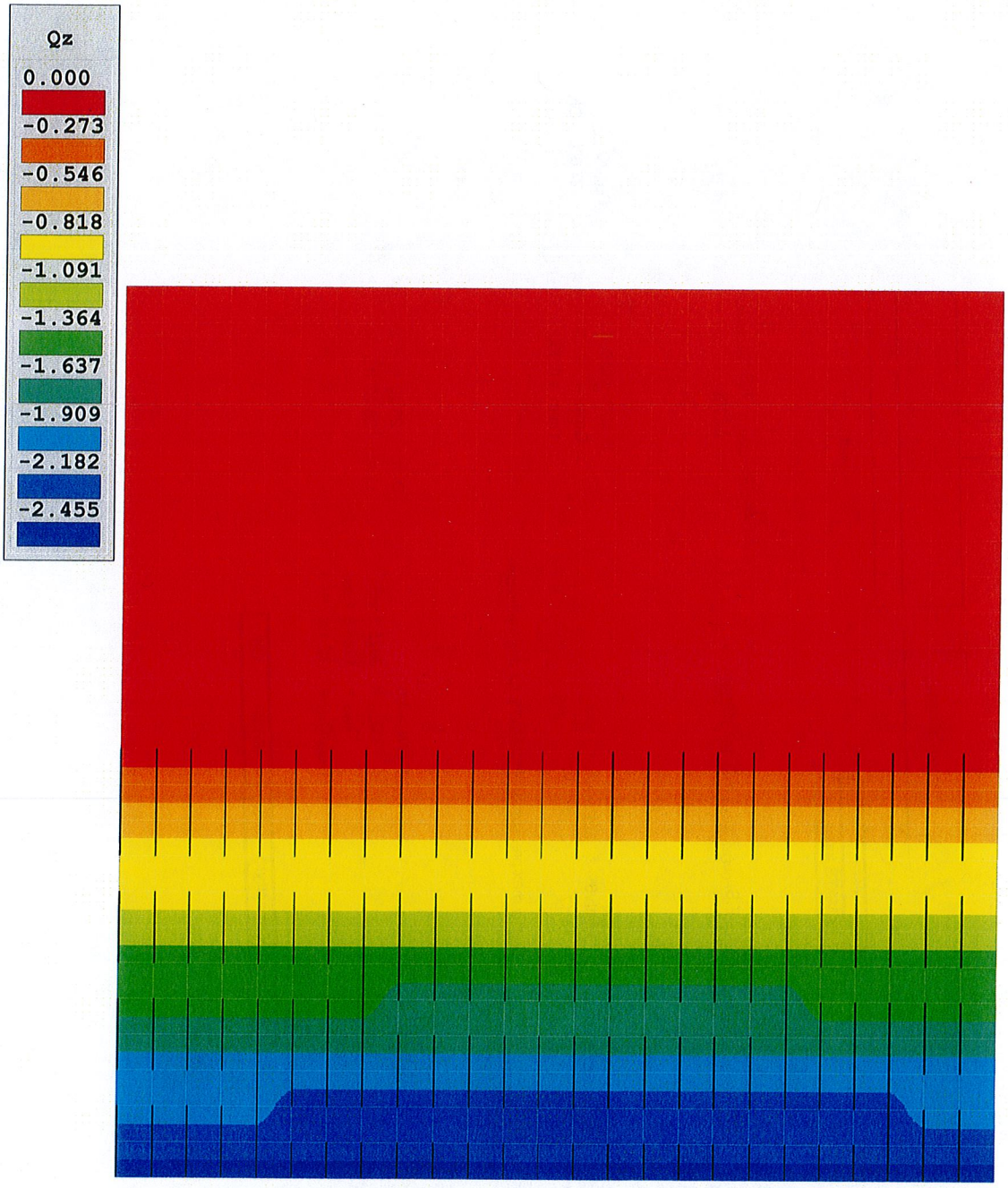
IF e/W > 1/6

Q_{ALL} =	3975.3	kips
Q_{MAX} =	1288.8	kips
Q_{MAX}/Q_{ALL} =	32.4%	OK

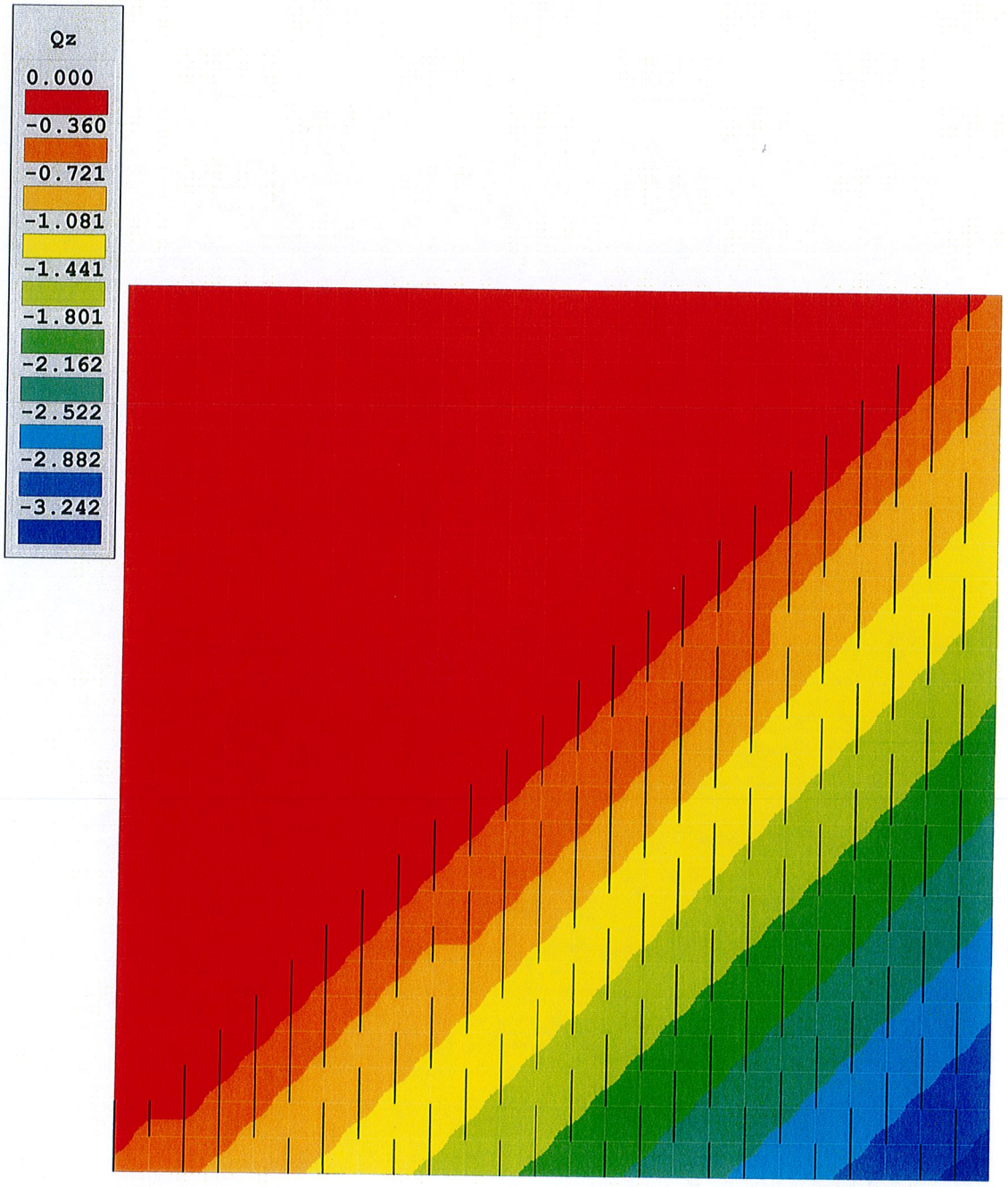
B_1 =	28.20 ft
L_1 =	28.20 ft

Foundation Capacity:	**47.7%**	**OK**

26225 GREENWICH NORTH
0 DEG



26225 GREENWICH NORTH
45 DEG



ROBINSON & COLE LLP

KENNETH C. BALDWIN

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Direct (860) 275-8345

ORIGINAL

May 3, 2011

Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Construction Activity**
EM-VER-057-100929 – 363 Riversville Road, Greenwich, CT
EM-VER-089-100224B – 1 Hartford Square, New Britain, CT
EM-VER-132-100216 – 151 Sand Hill Road, South Windsor, CT
EM-VER-160-100125 – 56 Cosgrove Road, Willington, CT

Dear Ms. Roberts:

The purpose of this letter is to notify you that construction activity associated with each of the above-referenced facility modifications has been completed.

If you have any questions or need any additional information regarding any of these facilities, please do not hesitate to contact me.

Sincerely,

Kenneth C. Baldwin

Copy to:
Sandy M. Carter

11030280-v1