ROBINSON & COLE LLP

KENNETH C. BALDWIN

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Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

ORIGINAL

November 10, 2010

RECEIVED
NOV 15 2010
CONNECTICUT
SITING COUNCIL

Michael Perrone
Siting Analyst
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **EM-VER-085-100216 – Cellco Partnership d/b/a Verizon Wireless**
230 Guinea Road, Monroe, Connecticut

Dear Mr. Perrone:

On March 22, 2010, the Siting Council acknowledged receipt of Cellco's notice of intent to modify the above-referenced telecommunications facility. This modification involved the replacement of six of Cellco's existing cellular antennas with six newer model cellular antennas.

As a condition of this acknowledgement, Cellco was required to provide the Council with a signed letter from a Professional Engineer verifying that the tower modifications were completed in accordance with the previously submitted Structural Analysis. Attached to this letter is a Tower Modification Certification Letter verifying that the modifications were completed.

If you have any questions regarding any of these materials, please do not hesitate to contact me or Rachel Mayo.

Sincerely,

Kenneth C. Baldwin

Attachment
Copy to:
Sandy M. Carter
Brian Ragozzine
Mark Gauger

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CENTEK engineering

Centered on Solutions℠

November 10, 2010

Mr. Brian Ragazzine
Verizon Wireless
99 East River Drive
East Hartford, Connecticut 06108

Re:	**Tower Modification Certification Letter**
Project:	**Verizon ~ Monroe** 230 Guinea Road Monroe, Connecticut
Tower Owner:	**AT&T Mobility** 500 Enterprise Drive, Suite 3A Rocky Hill, CT 06067
Engineer:	**GPD Associates** 520 South Main Street., Suite 2531, Akron, OH 44311
Contractor:	**Construction Services of Branford** 63-3 North Branford Road, Branford, CT 06405

Centek Project No.: 10001.CO84

Dear Mr. Ragazzine,

We are providing this "Tower Modification Certification Letter" with regard to the antenna upgrade by Verizon Wireless at the above referenced project.

The following are the basis for substantiating compliance with the design drawings prepared by GPD associates:

- Review of the structural analysis report prepared by GPD Associated dated 1/12/2010.
- Review of the GPD Associates design documents 2009268.80 dated 10/20/2009 marked Rev. A.
- Review of Verizon Wireless antenna configuration sheet dated 7/29/2009.
- Field observations by Centek personnel of antenna installation on 11/9/2010 confirming compliance with the above referenced documents.

The work under this Contract has been reviewed and found, to the Engineer's best knowledge, information and belief, to be completed in general compliance with the documents referenced above.

Sincerely,

Carlo F. Centore, PE
Principal ~Structural Engineer

STATE OF CONNECTICUT
CARLO F. CENTORE
No. 16894
LICENSED
PROFESSIONAL ENGINEER

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

March 22, 2010

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

RE: **EM-VER-085-100216** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 230 Guinea Road, Monroe, 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:

- The tower shall be modified per the structural analysis report dated January 12, 2010 and sealed by David B. Granger, P.E.;
- The tower shall not exceed 100 percent of its post-construction structural rating; and
- Not more than 45 days after completion of construction, a signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that the modifications have been properly completed and the tower does not exceed 100 percent of its post-construction structural rating

The proposed modifications are to be implemented as specified here and in your notice dated February 16, 2010, 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
Executive Director

SDP/MP/laf

c: The Honorable Stephen Vavrek, First Selectman, Town of Monroe
Daniel A. Tuba, Planning Administrator, Town of Monroe
Christopher B. Fisher, Esq., Cuddy & Feder LLP

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

February 19, 2010

The Honorable Stephen Vavrek
First Selectman
Town of Monroe
Town Hall
7 Fan Hill Road
Monroe, CT 06468-1800

RE: **EM-VER-085-100216** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 230 Guinea Road, Monroe, Connecticut.

Dear First Selectman Vavrek:

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 March 5, 2010.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jbw

Enclosure: Notice of Intent

c: Daniel A. Tuba, Planning Administrator, Town of Monroe

ROBINSON & COLE

EM-VER-085-100216

KENNETH C. BALDWIN

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ORIGINAL

February 16, 2010

Via Hand Delivery

RECEIVED
FEB 16 2010
CONNECTICUT
SITING COUNCIL

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Antenna Swap**
230 Guinea Road, Monroe, Connecticut

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains wireless telecommunications antennas at the 218-foot level on the existing 240-foot tower at the above-referenced address. The tower is owned by AT&T and is shared by multiple wireless carriers. The Council approved Cellco's use of the existing facility in 2000 through its acknowledgement of EM-VER-085-000912. Cellco now intends to modify its installation by replacing six (6) of its cellular antennas with six (6) DB846H80E-SX cellular antennas at the same 218-foot level on the tower. Attached behind Tab 1 are the specifications for the new 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 Steve Vavrek, First Selectman for the Town of Monroe. The Town of Monroe is 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 height of the existing tower. Cellco's antennas will be located at the 218-foot level on the existing 240-foot tower.

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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 included is a Structural Analysis Report confirming that, with modifications, the tower and foundation can support Cellco's proposed antenna modifications. (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:
Steve Vavrek, Monroe First Selectman
Sandy M. Carter

Vertically Polarized Directed Dipole® Panel Antennas

80° HORIZONAL BEAMWIDTH

806 - 960 MHz

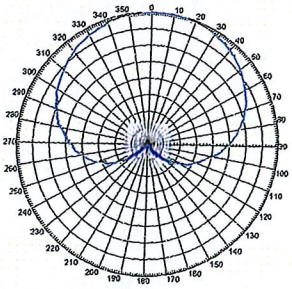
ANDREW®

HORIZONTAL BEAMWIDTH	80°		80°	80°
FREQUENCY RANGE	806-960 MHz		806-896 MHz	806-896 MHz
	12.3 & 12.5 dBd / 6° Tilt		12.5 dBd / 0-16° Tilt	14 dBd / 0° Tilt
MODEL	844H80T6E-XY		844G80VTA-SX	DB846H80E-SX
TYPE	Directed Dipole®		Directed Dipole®	Directed Dipole®
ELECTRICAL SPECIFICATIONS				
Frequency Range (MHz)	806-896	870-960	806-896	806-896
Gain (dBd/dBi)	12.3 / 14.4	12.5 / 14.6	12.5 / 14.6	14 / 16.1
Horizontal Beamwidth (Deg.)	80	80	80	80
Elevation Beamwidth (Deg.)	15	15	16	10
USLS (dB)	>15	>15	>15	N/A
Null Fill (dB) – Below Peak	N/A	N/A	N/A	N/A
Beam Tilt (Deg.)	6	6	0-16	0
VSWR	<1.5:1	<1.5:1	<1.4:1	<1.5:1
Front-To-Back Ratio (dB)	40	40	35	40
Isolation (dB)	N/A	N/A	N/A	N/A
Max. Input Power (Watts)	500	500	500	500
Polarization	Vertical	Vertical	Vertical	Vertical
Connector Location	Back	Back	Back	Back
Connector Type	7-16 DIN - Female	7-16 DIN - Female	7-16 DIN - Female	7-16 DIN - Female
Optional Connectors	N/A	N/A	N/A	N/A
MECHANICAL SPECIFICATIONS				
Length (inch/mm)	48 / 1,219	48 / 1,219	48 / 1,219	72 / 1,829
Width (inch/mm)	6.5 / 165	6.5 / 165	10 / 254	6.5 / 165
Depth (inch/mm)	8 / 203	8 / 203	8.5 / 216	8 / 203
Net Weight (lbs/kg)	14 / 6.3	14 / 6.3	11.5 / 5.2	16 / 7.2
Max. Flat Plate Area (ft^2/m^2)	1.08 / 0.10	1.08 / 0.10	0.97 / 0.09	1.72 / 0.16
Max. Wind Load at 100 mph (lbf/N)	59 / 262	59 / 262	53 / 233	95.6 / 425
Max. Wind Speed (mph/kmh)	125 / 201	125 / 201	125 / 201	125 / 201
Radome Material	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant
Reflector Material	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum
Radiator Material	Brass	Brass	Aluminum	Brass
Hardware Material	Galvanized Steel	Galvanized Steel	Galvanized Steel	Galvanized Steel
Color	Light Gray	Light Gray	Light Gray	Light Gray
Std. Mounting Hardware	DB380	DB380	DB380	DB380
Optional Downtilt Kit	DB5083	DB5083	DB5083	DB5083
Optional Special Mounting	DB5084-AZ	DB5084-AZ	DB5084-AZ	DB5084-AZ

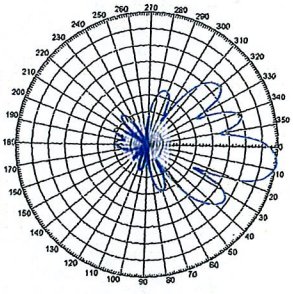
Specifications are subject to change. Please see our website for the latest information.

844H80T6E-XY

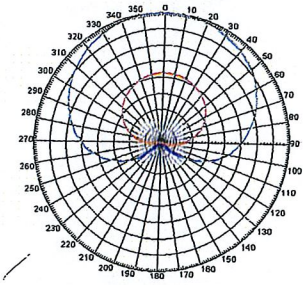
Azimuth Pattern

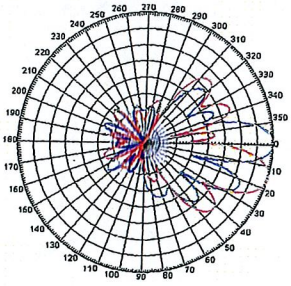


Elevation Pattern

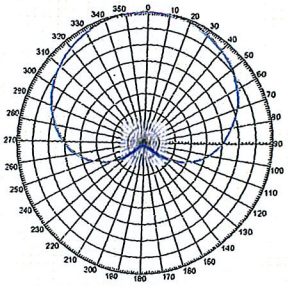


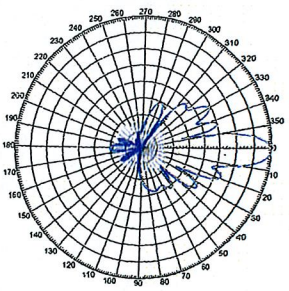
844G80VTA-SX





DB846H80E-SX





Scale: 10° radials, 5 dB per division

XPol

VERTICAL Directed Dipole®

VERTICAL Panel

Omni

Yagi

	General	Power	Density					
Site Name: Monroe								
Tower Height: Verizon @ 218Ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*PageNet				0.0127	931.5	0.6210	2.05%	
*RAW Mobile Data				0.0008	936	0.6240	0.13%	
*Nextel			222	0.0142	858	0.5720	2.48%	
*Cingular	2	296	236	0.0038	880	0.5867	0.65%	
*Cingular	2	427	236	0.0055	1930	1.0000	0.55%	
*SNET	10	100	234	0.0066	850	0.5667	1.16%	
Verizon	**3**	**181**	**218**	**0.0041**	**970**	**1.0000**	**0.41%**	
Verizon	**9**	**295**	**218**	**0.0201**	**869**	**0.5793**	**3.47%**	
								10.90%
* 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, Ohio 44311
(330) 572-2195
kclements@gpdgroup.com

GPD# 2009269.52 Rev. A
January 12, 2010

STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**60427**
	Site FA:	**10035068**
	Site Name:	**MONROE-GUINEA ROAD**
VERIZON DESIGNATION:	**Site Name:**	**Monroe**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F & 2006 IBC** **85-mph with 0″ ice** **74-mph with 1/2" ice**
SITE DATA:		**230 Guinea Road, Monroe, CT 06468, Fairfield County** **Latitude 41° 20' 30.659″ N, Longitude 73° 16' 28.307" W** **240′ Modified Rohn Self Support Tower**

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:

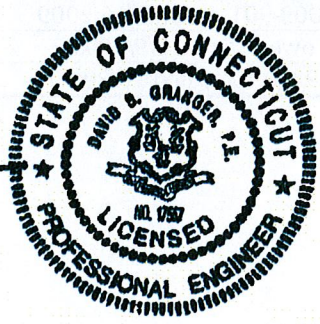
Elev. 218′ (6) Decibel DB846H80E-SX Antennas mounted on (3) existing 10′ Boom Gates, w/ (6) existing 1-5/8″ coax

Based on our analysis we have determined the **tower and its foundations will be sufficient once the modifications are installed in reference to the GPD design drawings (Job #: 2009268.80 Rev. A, dated 10/20/09)** 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 Granger, P.E.
Connecticut #: 17557



SUMMARY & RESULTS

The purpose of this analysis was to verify whether the modified 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.

Modifications have been designed by GPD Associates (Job #: 2009268.80 Rev. A, dated 10/20/09) and consisted of installing new diagonals from 20'-40' and new bolts from 140'-160'. These modifications have been considered in this analysis.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Legs	84.3%	Pass
Diagonals	90.2%	Pass
Horizontals	63.5%	Pass
Red. Horizontals/Diagonals	57.3%	Pass
Member Bolts	87.4%	Pass
Foundation	97.7%	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
Previous Structural Analysis	GPD Job # 2008262.20, dated 4/23/2008	Siterra
Preliminary Tower Summary	Verizon Co-location Document	Siterra
Site Lease Application	Verizon Application, dated 8/4/2008	Siterra
Foundation Analysis	WEI Project # 2009-901, dated 9/16/2009	GPD
Geotechnical Analysis	WEI Project # 2009-901, dated 9/16/2009	GPD
Tower Mapping	GPD & Patriot Towers, dated 9/9/2009	GPD
Modification Drawings	GPD Job #: 2009268.80, dated 10/20/09	GPD

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. All prior structural modifications, if any, are assumed to be as per data supplied/available, to have been properly installed and to be fully effective.
9. Tower Mounted Amplifiers are assumed to be installed behind antennas.
10. All existing loading was obtained from the most recent structural analysis by GPD, dated 4/23/2008, tower mapping by GPD & Patriot Towers, dated 9/9/2009, and the submitted PTS and is assumed to be accurate.
11. Modifications designed by GPD Associates Project #: 2009268.80 Rev. A, dated 10/20/09, have been included in this analysis.

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	MONROE-GUINEA ROAD
Site Number	60427
FA Number	10035068
Date of Analysis	1/12/2010
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)	SST	
Tower Height (top of steel AGL)	240	
Tower Manufacturer	Rohn	
Tower Model	n/a	
Tower Design	Rohn File #: 25692JC	7/5/1990
Foundation Design	n/a	
Geotech Report	WEI Project No. 2009-901	9/16/2009
Previous Analysis	GPD Job # 2008262.20	4/23/2008
Tower Mapping	GPD & Patriot Towers Job # 2009269.52	9/9/2009
Modification Drawings	GPD Job #: 2009268.80 Rev. A	10/20/2009
Foundation Mapping	WEI Project No. 2009-901	9/16/2009

Design Parameters

Design Code Used	TIA/EIA-222-F
Location of Tower (County, State)	Fairfield, CT
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	90.2%
Foundation	97.7%
Guy Wire	n/a

Steel Yield Strength (ksi)

Leg	50
Diagonals*	50
Horizontals*	50
Member Bolts	A325
Anchor Rods	A354-BC

*Strength Varies. See Appendix B.

Note: THE PROPOSED MODIFICATIONS HAVE BEEN CONSIDERED IN THIS ANALYSIS.

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	Attachment Leg/Face
Unknown	240	240						3	unknown	4' Standoffs				
AT&T Mobility	236	236	6	Panel	Powerwave	RA21.7770.00		3	unknown	10' T-Frames	12	LDF7-50A	1-5/8"	Face A
AT&T Mobility	236	236	6	Diplexer	Powerwave	LGP13519				on same mounts				
AT&T Mobility	236	236	6	TMA	Powerwave	LGP21401				on same mounts				
Nextel	226	226	6	Panel	unknown	4' Panels		3	unknown	10' T-Frames	9	LDF7-50A	1-5/8"	Face B
Nextel	226	226	3	Panel	Gabriel	DFPD2-52				on same mounts				
Verizon Wireless	215	218	6	Panel	Amphenol	WPA80090/CF E-DIN	30/140/270	3	unknown	6'x10' Boom Gate	12	LDF7-50A	1-5/8"	Face C
Verizon Wireless	215	218	6	Panel	Andrews	DB948F85T2E-M	30/140/270			on same mounts				
AT&T Mobility	201	207	2	Omni	unknown	12' Omni		2	unknown	4' Standoffs	2	LDF5-50A	7/8"	Face A

Note: The (6) existing WPA80090/CF Antennas shall be replaced by the proposed loading. The existing coax shall be reused.

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	Attachment Leg/Face
Verizon Wireless	215	218	6	Panel	Andrew	DB846H80E-SX	30/140/270			on existing mount				

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	Attachment Leg/Face

Revision:3
Date: 2/18/09

APPENDIX B

RISA Tower Output File

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 240.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 6.56 ft at the top and 30.18 ft at the base.
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 tower member 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 Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF5-50A (7/8 FOAM)	A	Yes	Ar (CfAe)	201.00 - 8.00	0.0000	-0.45	2	2	1.0000	1.0900		0.33
Feedline Ladder (Af)	C	Yes	Af (CfAe)	210.00 - 8.00	0.0000	-0.4	1	1	3.0000	3.0000	12.0000	8.40
LDF7-50A (1-5/8 FOAM)	C	Yes	Ar (CfAe)	215.00 - 8.00	0.0000	-0.4	12	6	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	B	Yes	Ar (CfAe)	226.00 - 8.00	0.0000	-0.4	9	9	1.0000	1.9800		0.82
Feedline Ladder (Af)	B	Yes	Af (CfAe)	226.00 - 8.00	0.0000	-0.4	1	1	3.0000	3.0000	12.0000	8.40
LDF7-50A (1-5/8 FOAM)	A	Yes	Ar (CfAe)	236.00 - 8.00	0.0000	-0.4	12	6	1.0000	1.9800		0.82
Feedline Ladder (Af)	A	Yes	Af (CfAe)	236.00 - 8.00	0.0000	-0.4	1	1	3.0000	3.0000	12.0000	8.40

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
4' Standoff	B	From Leg	1.00 0.00 0.00	0.0000	201.00	No Ice 1/2" Ice	3.41 4.47	3.41 4.47	0.08 0.10
4' Standoff	C	From Leg	1.00 0.00 0.00	0.0000	201.00	No Ice 1/2" Ice	3.41 4.47	3.41 4.47	0.08 0.10

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
12' Omni	B	From Leg	2.00 0.00 6.00	0.0000	201.00	No Ice 1/2" Ice	3.00 4.23	3.00 4.23	0.02 0.04
12' Omni	C	From Leg	2.00 0.00 6.00	0.0000	201.00	No Ice 1/2" Ice	3.00 4.23	3.00 4.23	0.02 0.04
Rohn 6'x10' Boom Gate (3)	C	None		0.0000	215.00	No Ice 1/2" Ice	47.40 56.40	47.40 56.40	1.62 2.01
(2) DB846H80E-SX	A	From Leg	3.00 0.00 3.00	30.0000	215.00	No Ice 1/2" Ice	5.09 5.55	6.06 6.52	0.02 0.05
(2) DB846H80E-SX	B	From Leg	3.00 0.00 3.00	20.0000	215.00	No Ice 1/2" Ice	5.09 5.55	6.06 6.52	0.02 0.05
(2) DB846H80E-SX	C	From Leg	3.00 0.00 3.00	30.0000	215.00	No Ice 1/2" Ice	5.09 5.55	6.06 6.52	0.02 0.05
(2) DB948F85T2E-M	A	From Leg	3.00 0.00 3.00	30.0000	215.00	No Ice 1/2" Ice	1.92 2.22	3.26 3.62	0.01 0.03
(2) DB948F85T2E-M	B	From Leg	3.00 0.00 3.00	20.0000	215.00	No Ice 1/2" Ice	1.92 2.22	3.26 3.62	0.01 0.03
(2) DB948F85T2E-M	C	From Leg	3.00 0.00 3.00	30.0000	215.00	No Ice 1/2" Ice	1.92 2.22	3.26 3.62	0.01 0.03
PiROD 10' Lightweight T-Frame (GPD)	A	None		0.0000	226.00	No Ice 1/2" Ice	9.30 14.50	2.68 4.44	0.25 0.34
PiROD 10' Lightweight T-Frame (GPD)	B	None		0.0000	226.00	No Ice 1/2" Ice	9.30 14.50	2.68 4.44	0.25 0.34
PiROD 10' Lightweight T-Frame (GPD)	C	None		0.0000	226.00	No Ice 1/2" Ice	9.30 14.50	2.68 4.44	0.25 0.34
(2) 4' Panel Antenna	A	From Leg	2.00 0.00 0.00	0.0000	226.00	No Ice 1/2" Ice	3.86 3.86	3.86 3.86	0.05 0.05
(2) 4' Panel Antenna	B	From Leg	2.00 0.00 0.00	0.0000	226.00	No Ice 1/2" Ice	3.86 3.86	3.86 3.86	0.05 0.05
(2) 4' Panel Antenna	C	From Leg	2.00 0.00 0.00	0.0000	226.00	No Ice 1/2" Ice	3.86 3.86	3.86 3.86	0.05 0.05
DFPD2-52	A	From Leg	2.00 0.00 0.00	0.0000	226.00	No Ice 1/2" Ice	5.60 5.92	0.33 0.47	0.01 0.03
DFPD2-52	B	From Leg	2.00 0.00 0.00	0.0000	226.00	No Ice 1/2" Ice	5.60 5.92	0.33 0.47	0.01 0.03
DFPD2-52	C	From Leg	2.00 0.00 0.00	0.0000	226.00	No Ice 1/2" Ice	5.60 5.92	0.33 0.47	0.01 0.03
PiROD 10' Lightweight T-Frame (GPD)	A	None		0.0000	236.00	No Ice 1/2" Ice	9.30 14.50	2.68 4.44	0.25 0.34
PiROD 10' Lightweight T-Frame (GPD)	B	None		0.0000	236.00	No Ice 1/2" Ice	9.30 14.50	2.68 4.44	0.25 0.34
PiROD 10' Lightweight T-Frame (GPD)	C	None		0.0000	236.00	No Ice 1/2" Ice	9.30 14.50	2.68 4.44	0.25 0.34
(2) RA21.7770.00	A	From Leg	2.00	0.0000	236.00	No Ice	5.88	2.93	0.03

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
			0.00			1/2" Ice	6.31	3.27	0.06
			0.00						
(2) RA21.7770.00	B	From Leg	2.00	0.0000	236.00	No Ice	5.88	2.93	0.03
			0.00			1/2" Ice	6.31	3.27	0.06
			0.00						
(2) RA21.7770.00	C	From Leg	2.00	0.0000	236.00	No Ice	5.88	2.93	0.03
			0.00			1/2" Ice	6.31	3.27	0.06
			0.00						
(2) LGP13519	A	From Leg	2.00	0.0000	236.00	No Ice	0.34	0.21	0.01
			0.00			1/2" Ice	0.42	0.28	0.01
			0.00						
(2) LGP13519	B	From Leg	2.00	0.0000	236.00	No Ice	0.34	0.21	0.01
			0.00			1/2" Ice	0.42	0.28	0.01
			0.00						
(2) LGP13519	C	From Leg	2.00	0.0000	236.00	No Ice	0.34	0.21	0.01
			0.00			1/2" Ice	0.42	0.28	0.01
			0.00						
(2) LGP21401	A	From Leg	2.00	0.0000	236.00	No Ice	0.00	0.23	0.01
			0.00			1/2" Ice	0.00	0.31	0.02
			0.00						
(2) LGP21401	B	From Leg	2.00	0.0000	236.00	No Ice	0.00	0.23	0.01
			0.00			1/2" Ice	0.00	0.31	0.02
			0.00						
(2) LGP21401	C	From Leg	2.00	0.0000	236.00	No Ice	0.00	0.23	0.01
			0.00			1/2" Ice	0.00	0.31	0.02
			0.00						
4' Standoff	A	None		0.0000	240.00	No Ice	3.41	3.41	0.08
						1/2" Ice	4.47	4.47	0.10
4' Standoff	B	None		0.0000	240.00	No Ice	3.41	3.41	0.08
						1/2" Ice	4.47	4.47	0.10
4' Standoff	C	None		0.0000	240.00	No Ice	3.41	3.41	0.08
						1/2" Ice	4.47	4.47	0.10

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	240	Leg	A325N	0.7500	4	2.44	19.44	0.126 ✔	1.333	Bolt Tension
		Diagonal	A325N	0.5000	1	2.79	4.12	0.678 ✔	1.333	Bolt Shear
		Top Girt	A325N	0.5000	1	0.23	4.12	0.056 ✔	1.333	Bolt Shear
T2	220	Leg	A325N	0.8750	4	8.41	26.46	0.318 ✔	1.333	Bolt Tension
		Diagonal	A325N	0.5000	1	3.83	4.12	0.929 ✔	1.333	Bolt Shear
		Top Girt	A325N	0.5000	1	0.32	4.12	0.077 ✔	1.333	Bolt Shear
T3	200	Leg	A325N	0.8750	4	14.09	26.46	0.533 ✔	1.333	Bolt Tension
		Diagonal	A325N	0.5000	1	4.39	4.12	1.064 ✔	1.333	Bolt Shear
T4	180	Leg	A325N	1.0000	4	19.38	34.56	0.561 ✔	1.333	Bolt Tension
		Diagonal	A325N	0.5000	1	4.81	4.12	1.166 ✔	1.333	Bolt Shear

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T5	160	Leg	A325N	1.0000	4	24.38	34.56	0.705 ✓	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	5.29	5.89	0.898 ✓	1.333	Bolt Shear
T6	140	Leg	A325N	1.0000	6	19.21	34.56	0.556 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	1	6.38	6.44	0.991 ✓	1.333	Bolt Shear
T7	120	Leg	A325N	1.0000	6	22.37	34.56	0.647 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	1	7.02	6.44	1.089 ✓	1.333	Bolt Shear
T8	100	Leg	A325N	1.0000	6	25.52	34.56	0.739 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	1	7.67	9.28	0.827 ✓	1.333	Bolt Shear
T9	80	Leg	A325N	1.0000	6	28.63	34.56	0.828 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	1	8.49	9.28	0.915 ✓	1.333	Bolt Shear
T10	60	Leg	A325N	1.0000	8	23.79	34.56	0.688 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	1	9.22	9.28	0.993 ✓	1.333	Bolt Shear
T11	40	Leg	A325N	1.0000	8	23.97	34.56	0.694 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	3	5.37	9.28	0.579 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.7500	2	4.24	9.28	0.457 ✓	1.333	Bolt Shear
T12	20	Leg	A354-BC	1.0000	10	20.98	32.40	0.648 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	3	5.12	9.28	0.552 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.7500	2	4.45	9.28	0.480 ✓	1.333	Bolt Shear

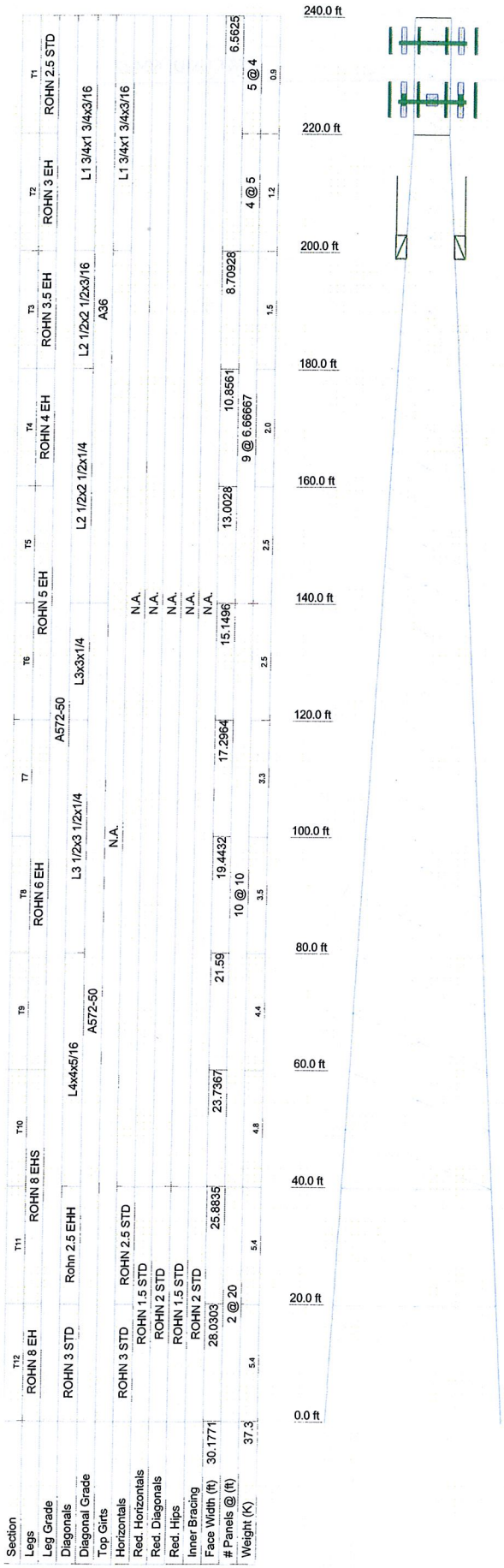
Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T1	240 - 220	Leg	ROHN 2.5 STD	1	-13.47	55.08	24.5	Pass
		Diagonal	L1 3/4x1 3/4x3/16	12	-2.79	7.87	35.5	Pass
							50.8 (b)	
		Top Girt	L1 3/4x1 3/4x3/16	5	-0.23	2.73	8.5	Pass
T2	220 - 200	Leg	ROHN 3 EH	37	-41.61	96.05	43.3	Pass
		Diagonal	L1 3/4x1 3/4x3/16	47	-3.78	4.44	85.2	Pass
		Top Girt	L1 3/4x1 3/4x3/16	40	-0.31	2.73	11.5	Pass
T3	200 - 180	Leg	ROHN 3.5 EH	67	-68.06	110.26	61.7	Pass
		Diagonal	L2 1/2x2 1/2x3/16	74	-4.39	8.16	53.8	Pass
							79.8 (b)	
T4	180 - 160	Leg	ROHN 4 EH	88	-94.39	139.06	67.9	Pass
		Diagonal	L2 1/2x2 1/2x1/4	95	-4.81	8.04	59.8	Pass
							87.4 (b)	
T5	160 - 140	Leg	ROHN 5 EH	109	-120.45	206.28	58.4	Pass
		Diagonal	L2 1/2x2 1/2x1/4	116	-5.29	6.29	84.1	Pass
T6	140 - 120	Leg	ROHN 5 EH	130	-143.97	177.44	81.1	Pass
		Diagonal	L3x3x1/4	137	-6.38	7.47	85.5	Pass
T7	120 - 100	Leg	ROHN 6 EH	145	-169.97	264.28	64.3	Pass
		Diagonal	L3 1/2x3 1/2x1/4	152	-7.02	10.11	69.4	Pass
							81.7 (b)	
T8	100 - 80	Leg	ROHN 6 EH	160	-196.19	264.28	74.2	Pass
		Diagonal	L3 1/2x3 1/2x1/4	167	-7.67	8.51	90.2	Pass
T9	80 - 60	Leg	ROHN 6 EH	175	-222.76	264.28	84.3	Pass
		Diagonal	L4x4x5/16	183	-8.49	13.33	63.7	Pass
							68.6 (b)	

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P_{allow} K	% Capacity	Pass Fail
T10	60 - 40	Leg	ROHN 8 EHS	190	-249.63	332.52	75.1	Pass
		Diagonal	L4x4x5/16	198	-9.22	11.59	79.5	Pass
T11	40 - 20	Leg	ROHN 8 EHS	205	-255.80	332.52	76.9	Pass
		Diagonal	Rohn 2.5 EHH	228	-16.10	26.60	60.5	Pass
		Horizontal	ROHN 2.5 STD	224	-8.48	13.36	63.5	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	229	-4.44	11.29	39.3	Pass
		Redund Diag 1 Bracing	ROHN 2 STD	211	-3.99	7.71	51.8	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	231	-0.04	10.23	0.4	Pass
		Redund Hip Diagonal Bracing	ROHN 1.5 STD	232	-0.04	1.84	2.0	Pass
		Inner Bracing	ROHN 2 STD	236	-0.15	5.49	2.7	Pass
T12	20 - 0	Leg	ROHN 8 EH	238	-282.35	435.20	64.9	Pass
		Diagonal	ROHN 3 STD	258	-15.36	26.56	57.8	Pass
		Horizontal	ROHN 3 STD	257	-8.90	22.37	39.8	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	262	-4.90	9.69	50.5	Pass
		Redund Diag 1 Bracing	ROHN 2 STD	244	-4.16	7.27	57.3	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	264	-0.04	8.72	0.4	Pass
		Redund Hip Diagonal Bracing	ROHN 1.5 STD	265	-0.04	1.68	2.4	Pass
		Inner Bracing	ROHN 2 STD	269	-0.15	4.69	3.3	Pass
						Summary		
						Leg (T9)	84.3	Pass
						Diagonal (T8)	90.2	Pass
						Horizontal (T11)	63.5	Pass
						Top Girt (T2)	11.5	Pass
						Redund Horz 1 Bracing (T12)	50.5	Pass
						Redund Diag 1 Bracing (T12)	57.3	Pass
						Redund Hip 1 Bracing (T12)	0.4	Pass
						Redund Hip Diagonal Bracing (T12)	2.4	Pass
						Inner Bracing (T12)	3.3	Pass
						Bolt Checks	87.4	Pass
						RATING =	**90.2**	**Pass**

APPENDIX C

Tower Elevation Drawing



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
4' Standoff	240	DFPD2-52	226
4' Standoff	240	DFPD2-52	226
4' Standoff	240	PiROD 10' Lightweight T-Frame (GPD)	226
PiROD 10' Lightweight T-Frame (GPD)	236	PiROD 10' Lightweight T-Frame (GPD)	226
PiROD 10' Lightweight T-Frame (GPD)	236	PiROD 10' Lightweight T-Frame (GPD)	226
PiROD 10' Lightweight T-Frame (GPD)	236	(2) 4' Panel Antenna	226
(2) RA21.7770.00	236	(2) DB846H80E-SX	215
(2) RA21.7770.00	236	(2) DB948F85T2E-M	215
(2) RA21.7770.00	236	(2) DB948F85T2E-M	215
(2) LGP13519	236	(2) DB948F85T2E-M	215
(2) LGP13519	236	Rohn 6'x10' Boom Gate (3)	215
(2) LGP13519	236	(2) DB846H80E-SX	215
(2) LGP21401	236	(2) DB846H80E-SX	215
(2) LGP21401	236	12' Omni	201
(2) LGP21401	236	4' Standoff	201
(2) 4' Panel Antenna	226	4' Standoff	201
(2) 4' Panel Antenna	226	12' Omni	201
DFPD2-52	226		

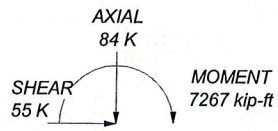
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

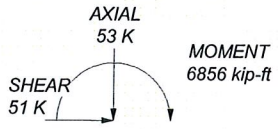
TOWER DESIGN NOTES

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: 90.2%

MAX. CORNER REACTIONS AT BASE:
DOWN: 306 K
UPLIFT: -229 K
SHEAR: 33 K



TORQUE 15 kip-ft
74 mph WIND - 0.5000 in ICE



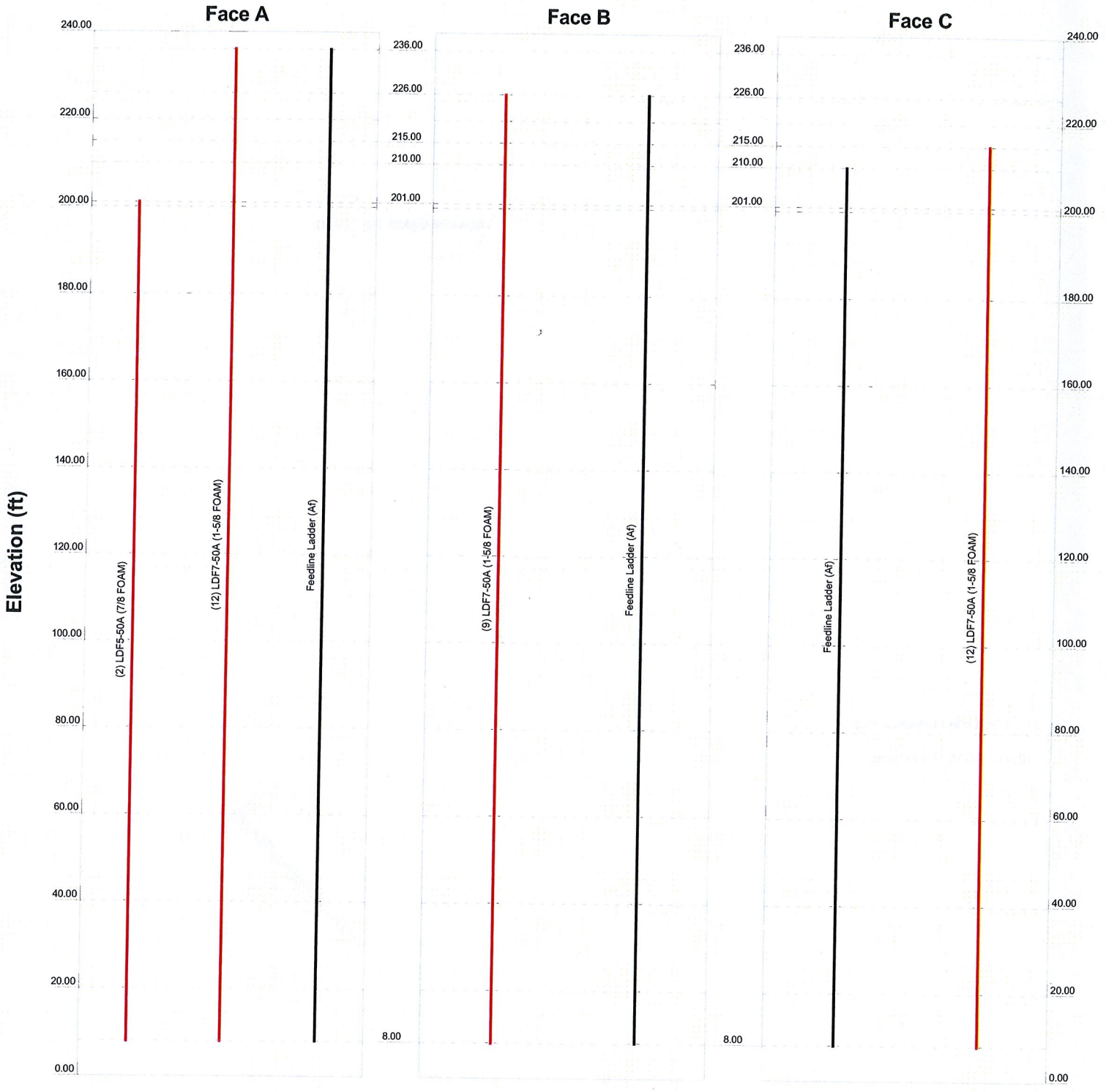
TORQUE 12 kip-ft
REACTIONS - 85 mph WIND

GPD GROUP
Consulting Engineers
GPD Associates
520 S. Main St. Suite 2531
Akron, OH 44311
Phone: (330) 572-2100
FAX: (330) 572-2101

Job: *MONROE-GUINEA RD 60427*			
Project: *2009269.52*			
Client: AT&T Mobility	Drawn by: dherriott	App'd:	
Code: TIA/EIA-222-F	Date: 01/12/10	Scale: NTS	
Path: N:\2009\2009287\Z\Modifications\RISA Mod\MONROE-GUINEA RD 60427.er		Dwg No. E-1	

Feedline Distribution Chart
0' - 240'

Round | Flat | App In Face | App Out Face | Truss Leg



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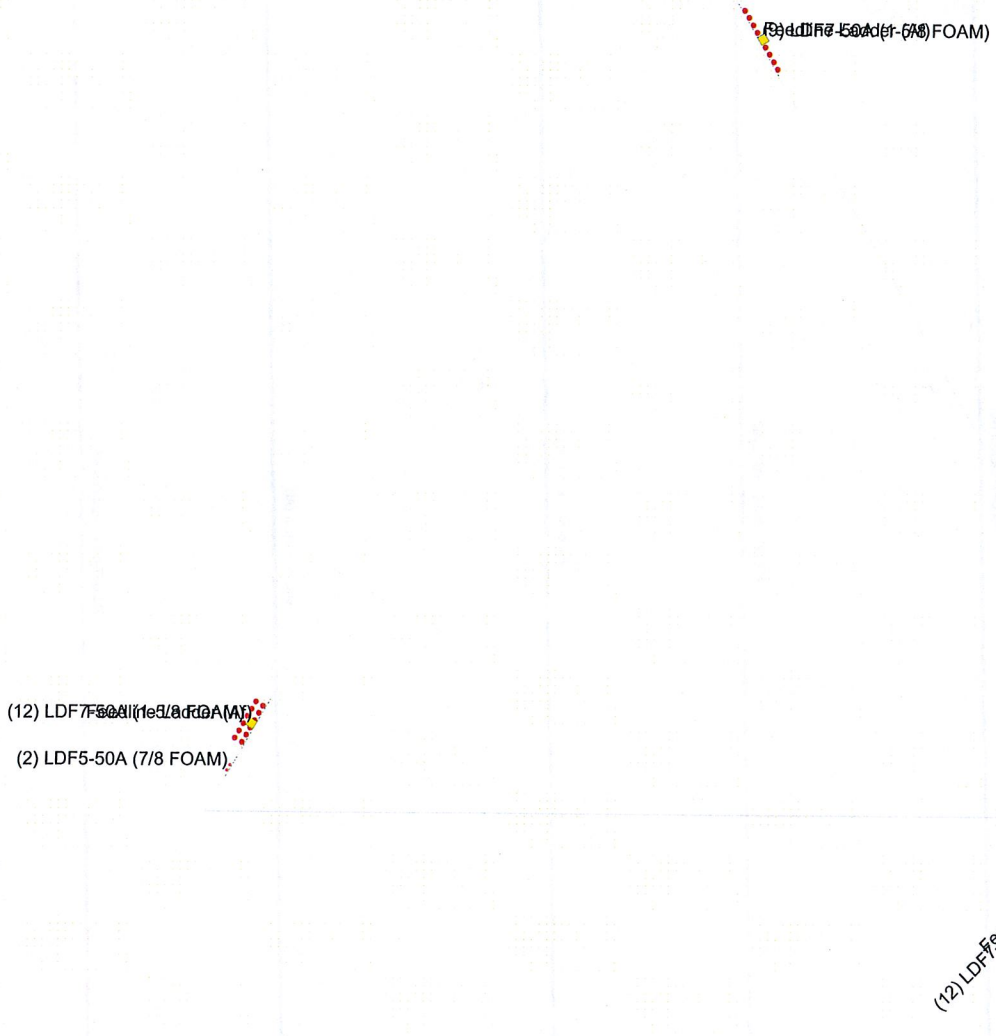
Job: ***MONROE-GUINEA RD 60427***			
Project: ***2009269.52***			
Client: AT&T Mobility	Drawn by: dherriott	App'd:	
Code: TIA/EIA-222-F	Date: 01/12/10	Scale: NTS	
Path: N:\2009\2009287\52\Modifications\RISA Mod\MONROE-GUINEA RD 60427.eri		Dwg No. E-7	

Feedline Plan

Round _____ Flat _____ App In Face App Out Face



GPD GROUP Consulting Engineers	GPD Associates 520 S. Main St. Suite 2531 Akron, OH 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	Job: MONROE-GUINEA RD 60427	
		Project: 2009269.52	
		Client: AT&T Mobility	Drawn by: dherriott / App'd:
		Code: TIA/EIA-222-F	Date: 01/12/10 / Scale: NTS
		Path: N:\2009\2009287\Z\Modifications\RISA Mod\MONROE-GUINEA RD 60427.er	Dwg No. E-7

APPENDIX D

Foundation Analysis

520 South Main Street • Suite 2531 • Akron, Ohio 44311• PHONE 330-572-2100 • FAX 330-572-2101

GPD ASSOCIATES

Engineers • Architects • Planners

GPD ASSOCIATES

Job 2009269.52

Sheet No 1 Of 1

Calculated By DAD Date 10/8/09

Checked By _____ Date _____

Foundation Capacity

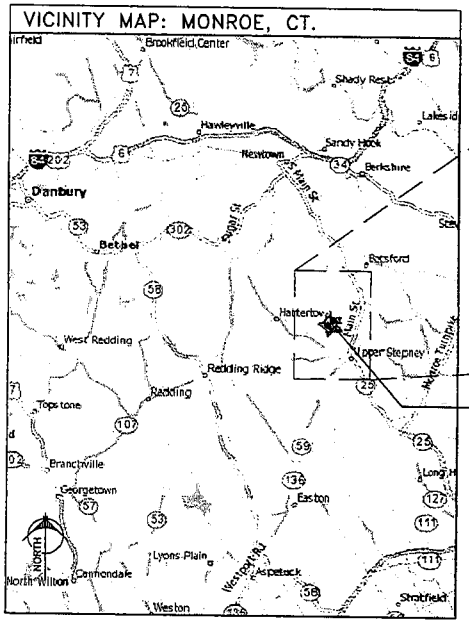
Compression Reaction (k)	306.00	
Soil weight (kcf)	0.12	
Concrete weight (kcf)	0.15	
Allowable bearing (ksf)	30.00	
Pier depth (ft)	6.00	
Pier radius (ft)	2.00	
Pier volume (ft)	75.40	
Pad width (ft)	16.00	
Pad depth (ft)	3.00	
Pad volume (c.f.)	768.00	
Soil volume above pad (c.f.)	1460.60	
Soil volume with cones (c.f.)	2221.71	
Capacity down (k)	7680.00	7.9% PASS
Total compression force (k)	607.78	
Uplift reaction up (k)	229.00	97.7% PASS
Uplift capacity (k)	234.51	

MONROE - GUINEA ROAD

USID#: 60427

240' ROHN SELF SUPPORT TOWER

VICINITY MAP: MONROE, CT.



PROJECT SUMMARY	
TOWER OWNER:	AT&T MOBILITY
TOWER TYPE:	SELF SUPPORT
GOVERNING CODE:	EIA/TIA-222-F & 2006 IBC
SITE ADDRESS:	230 GUINEA RD. MONROE, CONNECTICUT 06468 FAIRFIELD COUNTY
LATITUDE:	41° 20' 30.659"
LONGITUDE:	73° 16' 28.307"
OWNER CONTACT:	MARTIN JELLEME 5405 WINDWARD PKWY. ALPHARETTA, GA 30004 (770) 708-6124
ENGINEER CONTACT:	KEVIN CLEMENTS 520 SOUTH MAIN ST., SUITE 2531 AKRON, OH 44311 (330) 572-2195

PROJECT OVERVIEW:
THE LISTED DRAWINGS REPRESENT REQUIRED MODIFICATIONS TO THE TOWER BY REPLACING THE EXISTING DIAGONALS AND BOLTS.

DATE	REVISION	DRAWING INDEX
-		TITLE SHEET
-		N-1 PROJECT NOTES
10/20/09	A	S-1 TOWER ELEVATION & MODIFICATION DETAILS

TOWER OWNER

at&t

ENGINEERS

GLAUS PYLE SCHOMER BURNS & DEHAVEN INC.
GPD ASSOCIATES
520 South Main Street, Suite 2531 Akron, Ohio 44311
330-572-2100 , Fax 330-572-2102

SITE NAME:
MONROE - GUINEA ROAD

SITE NUMBER:
USID#: 60427

GPD JOB NUMBER:
2009268.80

DATE : 10/20/09 | REVISION | A

GENERAL NOTES

1. THE FOLLOWING DRAWINGS REPRESENT MODIFICATIONS TO THE EXISTING TOWER. THE MODIFICATIONS ARE BASED ON GPD ASSOCIATES STRUCTURAL REPORT (PROJECT #: 2008262.20 DATED APRIL 23, 2008). ALL MODIFICATIONS MUST BE INSTALLED TO BRING THE TOWER INTO CONFORMANCE WITH EIA/TIA-222-F AND 2006 IBC.

2. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF EIA/TIA-222-F, 2006 IBC AND AISC. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES AND THE CONTRACT SPECIFICATIONS.

3. ALL ORIGINAL TOWER INFORMATION WAS OBTAINED IN THE FORM OF A PREVIOUS STRUCTURAL ANALYSIS BY WALKER ENGINEERING INC. (JOB #: W0108-1032, DATED JUNE 13, 2001). CONTRACTOR SHALL OBTAIN AND BECOME FAMILIAR WITH THE REFERENCED TOWER DOCUMENTS.

4. THIS DESIGN ASSUMES THE TOWER AND FOUNDATIONS HAVE BEEN WELL MAINTAINED, IN GOOD CONDITION, AND ARE WITHOUT DEFECT. BENT MEMBERS, CORRODED MEMBERS, LOOSE BOLTS, CRACKED WELDS AND OTHER MEMBER DEFECTS HAVE NOT BEEN CONSIDERED. THE TOWER IS ASSUMED TO BE PLUMB AND THE SITE IS ASSUMED TO BE LEVEL. THIS DESIGN IS BEING PROVIDED WITHOUT THE BENEFIT OF A SITE VISIT BY GPD ASSOCIATES. CONTRACTOR SHALL COMMISSION A COMPLETE CONDITION ASSESSMENT PRIOR TO ORDERING ANY REINFORCING MATERIALS. CONTRACTOR SHALL SUPPLY CONDITION ASSESSMENT TO ENGINEER FOR REVIEW. SEE CONTRACTOR NOTES.

5. MANUFACTURER TOLERANCES, FIELD ADJUSTMENTS, INCORRECT STACKING, AND TEMPERATURE CAN CAUSE DIMENSION DISCREPANCIES. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS. ALL FIELD MEASUREMENTS MUST BE REPORTED TO ENGINEER.

6. ALL NEW STEEL SHALL BE HOT DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. A490 BOLTS SHALL BE COATED WITH DACROMET F1136 GRADE 3 COATING. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.

7. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING BRUSH APPLIED PAINT (ZRC OR EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).

8. LOADINGS:

WIND LOADS:
FASTEST MILE WIND SPEED (PER: EIA/TIA-222-F AND 2006 IBC) 85 MPH
(FAIRFIELD COUNTY, CONNECTICUT)

ICE LOADS:
ICE THICKNESS (WITH 25% WIND REDUCTION) 1/2"

9. STRUCTURAL STEEL:

SPECIFICATIONS
LATEST EDITION OF AISC

MATERIAL

PIPE	ASTM A572 (GR 50)
HOT DIPPED GALVANIZING	ASTM A123
BOLTS	A325 (U.N.O.) (ALL BOLT HOLES STANDARD SIZE U.N.O.)
NUTS	LOCKING (STRUCTURAL GRADE)

10. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZES AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.

11. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

12. THE ENGINEER (GPD ASSOCIATES) SHALL MAKE POST INSTALLATION OBSERVATION FOR TOWER. CONTRACTOR SHALL COORDINATE W/ENGINEER (GPD ASSOCIATES) WITHIN 72 HOURS AFTER 100% COMPLETION OF THE TOWER MODIFICATION INSTALLATION. INSTALLATION OF PROPOSED LOADING WITHOUT ENGINEER APPROVAL IS PROHIBITED. INSTALLATION OF THE PROPOSED LOADING IS BY OTHERS, AND IS BEYOND THE SCOPE OF THESE DRAWINGS.

CONTRACTOR NOTES

1. ALL CONTRACTORS AND LOWER TIER CONTRACTORS MUST ACKNOWLEDGE IN WRITING TO TOWER OWNER AND GPD ASSOCIATES THAT THEY HAVE OBTAINED, UNDERSTAND, AND WILL FOLLOW TOWER OWNER STANDARDS OF PRACTICE, CONSTRUCTION GUIDELINES, ALL SITE AND TOWER SAFETY PROCEDURES, ALL PRODUCT LIMITATIONS AND INSTALLATION PROCEDURES USED ON SITE, AND PROPOSED MODIFICATIONS DESCRIBED. RECEIPT OF ACKNOWLEDGMENT MUST OCCUR PRIOR TO BEGINNING CONSTRUCTION OR CLIMBING. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THIS DOCUMENTATION FOR TOWER OWNER AND GPD ASSOCIATES ON COMPANY LETTERHEAD AND THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN THIS DOCUMENTATION FROM LOWER TIER SUBCONTRACTORS (ON SUBCONTRACTOR LETTERHEAD) AND DELIVER IT TO TOWER OWNER AND GPD ASSOCIATES.

2. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, GPD ASSOCIATES SHALL BE CONTACTED IMMEDIATELY TO EVALUATE THE SIGNIFICANCE OF THE DEVIATION.

3. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE. THIS INCLUDES PROVIDING THE NECESSARY CERTIFICATIONS TO THE TOWER OWNER AND ENGINEER.

4. THESE DRAWINGS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.

5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS AND PRECAUTIONS IN CONNECTION WITH THIS WORK.

6. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING; ANY PROBLEMS WITH ACCESS, INTERFERENCE, ETC. SHALL BE RESOLVED PRIOR TO MOBILIZATION. THE CONTRACTOR MUST VISIT THE SITE PRIOR TO ORDERING ANY MATERIAL AND MUST RESOLVE ALL ISSUES WITH THE OWNER PREVENTING A CONTINUOUS INSTALLATION. CONTRACTOR SHALL NOTE ALL GUY ATTACHMENT POINTS, ANTENNAS, MOUNTS, COAX, LIGHTING, CLIMBING SUPPORTS, STEP BOLTS, PORT HOLES, AND ANY OTHER TOWER APPURTENANCES IN THE REGION OF THE MODIFICATIONS. SEE GENERAL NOTES #4, AND #5, THIS SHEET.

7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY REMOVING ALL COAX, T-BRACKETS, ANTENNA MOUNTS, AND ANY OTHER TOWER APPURTENANCE THAT MAY INTERFERE WITH THE TOWER MODIFICATIONS. ALL TOWER APPURTENANCES MUST BE REPLACED AND/OR RESTORED TO ITS ORIGINAL LOCATION. ANY CARRIER DOWNTIME MUST BE COORDINATED WITH THE TOWER OWNER IN WRITING.

8. SOME ATTACHMENTS MAY REQUIRE CUSTOM MODIFICATIONS TO PROPERLY FIT THE MODIFIED REGION OF THE STRUCTURE. THESE CUSTOMIZATIONS ARE DESIGNED BY OTHERS AND MUST BE APPROVED BY THE ENGINEER PRIOR TO REMOVING SUCH ATTACHMENTS. ANY CARRIER DOWNTIME MUST BE COORDINATED WITH THE TOWER OWNER IN WRITING.

9. CONTRACTOR SHALL ONLY WORK WITHIN THE LIMITS OF THE TOWER OWNER'S PROPERTY AND APPROVED EASEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WORK IS WITHIN THESE BOUNDARIES. ANY WORK OUTSIDE THESE BOUNDARIES SHALL BE APPROVED IN WRITING BY THE LAND OWNER PRIOR TO MOBILIZATION. CONSTRUCTION STAKING AND BOUNDARY MARKING IS THE RESPONSIBILITY OF THE CONTRACTOR.

10. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THEN 10-MPH). CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY LOCAL TOWER SHORING, TEMPORARY GLOBAL TOWER SHORING, AND ALL SHORING OF SURROUNDING BUILDINGS, PADS, AND OTHER OUTDOOR SITE OBSTRUCTIONS. ALL SHORING, TEMPORARY BRACING, AND TEMPORARY SUPPORTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

11. MODIFICATIONS SHOWN SHALL BE INSTALLED ON ALL THREE (3) TOWER LEGS/FACES.

GPD ASSOCIATES

at&t

USID# 60427

REV.	DATE	DESCRIPTION

60427 MONROE-GUINEA ROAD
230 GUINEA RD.
MONROE, CONNECTICUT 06468

PROJECT NOTES

	DATE
DESIGNED AW	10/12/09
DRAWN RJK	10/12/09
CHECKED BP	10/12/09

JOB NO.
2009268.80

N-1

TOWER LEGEND

MARK	MEMBER SIZE
A	L2-1/2x2-1/2x3/16

ANTENNA SCHEDULE

ELEVATION	STATUS	ANTENNA	MOUNT	COAX
245'	EXISTING	(2) 8' OMNI	(2) 2' STANDOFFS	(2) 1-1/4"
236'	EXISTING	(6) 7770.00 (6) TMA'S LGP21401	(3) 12' T-FRAMES	(12) 1-5/8"
229'	EXISTING	(1) 6' YAGI	PIPE	(1) 1/2"
226'	EXISTING	(9) DB44H90E-XY	(3) 12' T-FRAMES	(9) 1-5/8"
210'	EXISTING	(6) SC8012	(3) 12' T-FRAMES	(6) 1-5/8"
	EXISTING	(6) DB948F85T2		(6) 1-5/8"
206'	EXISTING	(2) 10' OMNI WHIP	(2) 2' STANDOFF T-ARM	(2) 1-1/4"

MODIFICATION SCHEDULE

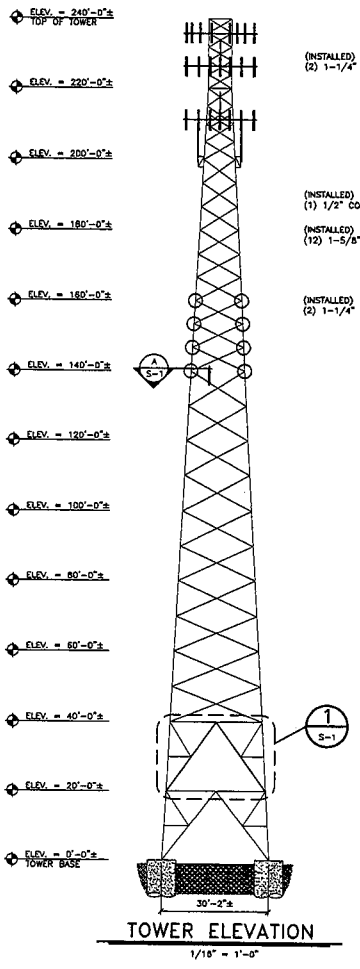
ELEVATION	NOTES
20'-40'	REPLACE EXISTING ROHN 2.5" STD DIAGONALS WITH NEW MEMBERS. SEE DETAIL 2/S-1 FOR DETAILS.
140'-160'	REPLACE EXISTING DIAGONAL BOLTS WITH NEW A325X (THREADS EXCLUDED FROM THE SHEAR PLANE) BOLTS OF SAME SIZE. BOLTS SHANK SHALL EXTEND AN 1/8" PAST MEMBER GUSSET. REFER TO DETAIL 1-S1.

NOTE: SEE TOWER SCHEDULE FOR NEW MEMBER SIZES

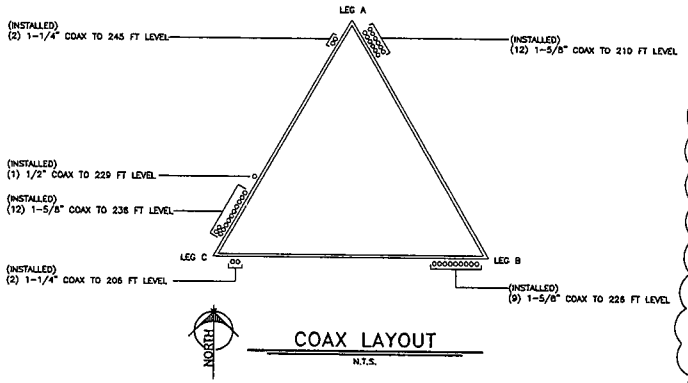
TOWER SCHEDULE

		ROHN 8 EH	ROHN 8 EHS		ROHN 5 EH		ROHN 4 EH	ROHN 3.5 EH	ROHN 3 EH	ROHN 2.5 STD
LEGS		ROHN 3 STD	ROHN 2.5 EHH	L4x4x5/16	L3-1/2x3-1/2x1/4	L3x3x1/4	L2-1/2x2-1/2x1/4	A	L1-3/4x1-3/4x3/16	
DIAGONALS					N.A.					
TOP GIRTS						N.A.				
HORIZONTALS		ROHN 3 STD	ROHN 2.5 STD			N.A.				
RED. HORIZONTALS			ROHN 1.5 STD			N.A.				
RED. DIAGONALS			ROHN 2 STD			N.A.				
RED. HIPS			ROHN 1.5 STD			N.A.				
INNER BRACING			ROHN 2 STD			N.A.				

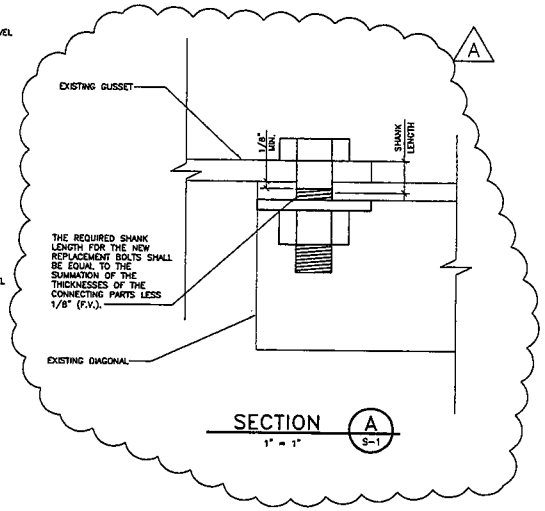
INDICATES MODIFIED MEMBER



TOWER ELEVATION
1/16" = 1'-0"

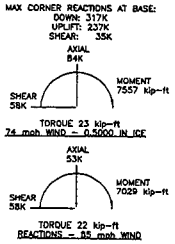


COAX LAYOUT
N.T.S.

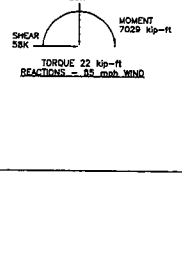


SECTION A
1" = 1"
S-1

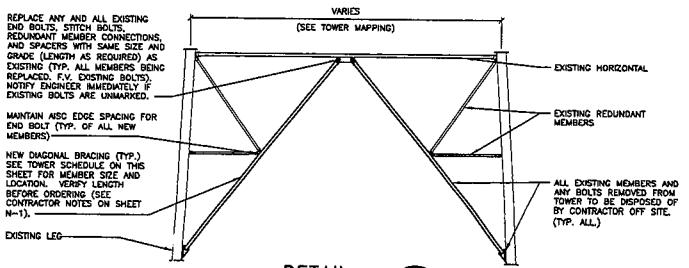
MAX CORNER REACTIONS AT BASE:
DOWN: 317K
UPLIFT: 227K
SHEAR: 35K



TORQUE 23 kip-ft
74 mph WIND - 0.5000 IN ICE



TORQUE 22 kip-ft
REACTIONS - 85 mph WIND



DETAIL 1/S-1
1/4" = 1'-0"

GPD ASSOCIATES

at&t

USID# 60427

REV.	DATE	DESCRIPTION
A	10/20/09	REVISED BOLT GRADE

60427 MONROE-GUINEA ROAD
230 GUINEA RD.
MONROE,CONNECTICUT 06468

TOWER ELEVATION AND MODIFICATION DETAILS

	DATE
DESIGNED AW	10/12/09
DRAWN RJK	10/12/09
CHECKED BDP	10/12/09

JOB NO.
2009268.80

S-1