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ORIGINAL

December 23, 2008

Via Federal Express

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

Re: Notice of Exempt Modification – Revised Structural
AT&T Towers Telecommunications Facility
290 Preston Avenue, Middletown, Connecticut

Dear Mr. Phelps:

Enclosed is a new structural for the above-referenced site indicating that it is below 100%, and signed by a professional engineer.

If you should need anything further, please feel free to contact me.

Respectfully Submitted,

Carrie L. Larson

Enclosure

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# 2008265.25 Rev. 1
December 8, 2008

REVISED STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**14635**
	Site Name:	**MIDDLETOWN SW**
	Site FA #:	**10035088**
POCKET DESIGNATION:	**Site Name:**	**Preston Ave**
	Site Number:	**CT-1492**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F & 2003 IBC** **85-mph with 0" ice** **74-mph with 1/2" ice**
SITE DATA:		**290 Preston Avenue, Middletown, CT 06457, Middlesex County** **Latitude 41° 33' 26.46"N, Longitude 72° 44' 35.807"W** **148' PJF Monopole**

Mr. Walker,

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

Elev. 90' (3) Kathrein 742-213 Antennas, pipe mounted, w/ (6) 1-5/8" external coax

Based on our analysis we have determined 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

STATE OF CONNECTICUT
DAVID B. GRANGER, P.E.
NO. 17557
LICENSED
PROFESSIONAL ENGINEER

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 Pocket Communications to AT&T. This report was commissioned by Mr. Glynn Walker of AT&T.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Monopole	91.7%	Pass
Base Plate	61.9%	Pass
Anchor Rods	74.0%	Pass
Foundation	72.4%	Pass

ANALYSIS METHOD

RISA Tower (Version 5.3.0.1), 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 and is being provided without the benefit of a site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
Preliminary Tower Summary	Pocket Co-location document	G. Walker
Site Lease Application	Pocket Application, dated 7/24/08	G. Walker
Previous Structural Analysis	URS Corporation Project #: 36931082.00008, dated 6/21/07	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. 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. All proposed coax is assumed to be external to the monopole.
10. Tower Mounted Amplifiers are assumed to be installed behind antennas.
11. All existing loading was obtained from the most recent structural analysis by URS Corporation Project # 36931082.00008, dated 6/21/07, tower photos and the submitted PTS and is assumed to be accurate.

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 not 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	MIDDLETOWN SW
Site Number	14635
Site FA #	10035088
Date of Analysis	12/8/2008
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)	148	
Tower Manufacturer	PennSummit Tubular	
Tower Model	n/a	
Manufacturer Drawings	PJF Job #: 29201-0230	2/26/2000
Foundation Design	n/a	
Geotech Report	n/a	
Foundation Mapping	n/a	
Tower Mapping	n/a	
Previous Structural Analysis	URS Project #: 36931082.00008	6/21/2007

Design Parameters

Design Code Used	TIA/EIA-222-F
Location of Tower (County, State)	Middlesex, Connecticut
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 Condition	
Tower	99.5%
Foundation	78.4%
Anchor Rods	80.3%
Base Plate	67.1%

Proposed Condition	
Tower	91.7%
Foundation	72.4%
Anchor Rods	74.0%
Base Plate	61.9%

Steel Yield Strength (ksi)

Pole	65
Base Plate	55
Anchor Rods	75

Note: Yield strengths based upon previous analysis

Existing/Reserved

Antenna							Mount				Transmission Line		
Antenna Owner	Centerline Height (ft)	Quantity	Type	Model	EPA (ft²) each	Azimuth	Quantity	Type	Model	EPA (ft²) total	Quantity	Size	Attachment Leg/Face
Unknown	148						1	12' LP Platform		25.00			
T-Mobile	140	9	Panel	DUO1417-8686-4-0-C	6.53		1	12' LP Platform		25.00	9	1-5/8"	Internal
T-Mobile	140	9	TMA	ADC TMA	Shielded			on same mount					
Sprint	130	9	Panel	DB980	3.90		1	12' LP Platform		25.00	6	1-5/8"	Internal
Nextel	120	12	Panel	DB844H90E-XY	2.87		1	12' LP Platform		25.00	10	7/8"	Internal
Verizon	110	6	Panel	LPA-80063/4CF	7.01		1	12' LP Platform		25.00	6	1-5/8"	Internal
Verizon	110	6	Panel	DB950F85E-M	2.53			on same mount			6	1-5/8"	Internal
Verizon	110	1	GPS	GPS Unit	0.17			on same mount			1	1/2"	Internal
Cingular	100	9	Panel	DUO1417-8686	6.53		1	13' LP Platform		15.70	9	1-5/8"	External
Cingular	100	6	TMA	TMA	Shielded			on same mount					
Cingular	100	3	Diplexer	Diplexer	Shielded			on same mount					
Unknown	75	2	GPS	GPS Units	0.17		2	2' Standoffs		2.72	2	1/2"	External
Unknown	50	1	GPS	GPS Units	0.17		1	2' Standoffs		1.36	1	1/2"	External

Note: The existing Cingular mounts, antennas, and corresponding coax at 100' shall be removed prior to the installation of the proposed loading.

Proposed

Antenna							Mount				Transmission Line		
Antenna Owner	Centerline Height (ft)	Quantity	Type	Model	EPA (ft²) each	Azimuth	Quantity	Type	Model	EPA (ft²) total	Quantity	Size	Attachment Leg/Face
Pocket Communications	90	3	Panel	742-213	5.42	30, 150, 270		Pipe Mounted		Shielded	6	1-5/8"	External

Future

Antenna							Mount				Transmission Line		
Antenna Owner	Centerline Height (ft)	Quantity	Type	Model	EPA (ft²) each	Azimuth	Quantity	Type	Model	EPA (ft²) total	Quantity	Size	Attachment Leg/Face

Revision:1.2
Date: 12/15/06

APPENDIX B

RISA Tower Output File

RISATower	Job: 14635 MIDDLETOWN SW	Page: 1 of 3
GPD Group 520 South Main St. Suite 2531 Akron, OH 44311 Phone: (614) 210-0751 FAX: (614) 210-0752	Project: 2008265.25	Date: 10:11:10 12/08/08
	Client: AT&T Mobility	Designed by: kdavis

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 Middlesex 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 60 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)	A	No	Inside Pole	140.00 - 8.00	9	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	130.00 - 8.00	6	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF5-50A (7/8 FOAM)	B	No	Inside Pole	120.00 - 8.00	10	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	110.00 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF4P-50A (1/2 FOAM)	C	No	Inside Pole	110.00 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
LDF7-50A (1-5/8 FOAM)	B	No	CaAa (Out Of Face)	90.00 - 8.00	1	No Ice	0.20	0.82
						1/2" Ice	0.30	2.33
LDF7-50A (1-5/8 FOAM)	B	No	CaAa (Out Of Face)	90.00 - 8.00	5	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF4-50A (1/2 FOAM)	C	No	CaAa (Out Of Face)	50.00 - 8.00	3	No Ice	0.00	0.15
						1/2" Ice	0.00	0.84
LDF4-50A (1/2 FOAM)	C	No	CaAa (Out Of Face)	75.00 - 50.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.84

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
12' LP Platform	C	None		0.0000	148.00	No Ice	25.00	25.00	1.50
						1/2" Ice	30.00	30.00	1.75
12' LP Platform	C	None		0.0000	137.00	No Ice	25.00	25.00	1.50
						1/2" Ice	30.00	30.00	1.75

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(3) DUO1417-8686	A	From Centroid-Leg	3.00 0.00 3.00	0.0000	137.00	No Ice 1/2" Ice	6.53 6.94	4.20 4.57	0.02 0.06
(3) DUO1417-8686	B	From Centroid-Leg	3.00 0.00 3.00	0.0000	137.00	No Ice 1/2" Ice	6.53 6.94	4.20 4.57	0.02 0.06
(3) DUO1417-8686	C	From Centroid-Leg	3.00 0.00 3.00	0.0000	137.00	No Ice 1/2" Ice	6.53 6.94	4.20 4.57	0.02 0.06
(3) TMA	A	From Centroid-Leg	3.00 0.00 3.00	0.0000	137.00	No Ice 1/2" Ice	0.00 0.00	0.12 0.17	0.00 0.00
(3) TMA	B	From Centroid-Leg	3.00 0.00 3.00	0.0000	137.00	No Ice 1/2" Ice	0.00 0.00	0.12 0.17	0.00 0.00
(3) TMA	C	From Centroid-Leg	3.00 0.00 3.00	0.0000	137.00	No Ice 1/2" Ice	0.00 0.00	0.12 0.17	0.00 0.00
12' LP Platform	C	None		0.0000	130.00	No Ice 1/2" Ice	25.00 30.00	25.00 30.00	1.50 1.75
(3) DB980	A	From Centroid-Leg	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	3.90 4.28	2.29 2.65	0.01 0.03
(3) DB980	B	From Centroid-Leg	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	3.90 4.28	2.29 2.65	0.01 0.03
(3) DB980	C	From Centroid-Leg	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	3.90 4.28	2.29 2.65	0.01 0.03
12' LP Platform	C	None		0.0000	120.00	No Ice 1/2" Ice	25.00 30.00	25.00 30.00	1.50 1.75
(4) DB844H90E-XY	A	From Centroid-Leg	3.00 0.00 0.00	0.0000	120.00	No Ice 1/2" Ice	2.87 3.18	3.73 4.10	0.01 0.04
(4) DB844H90E-XY	B	From Centroid-Leg	3.00 0.00 0.00	0.0000	120.00	No Ice 1/2" Ice	2.87 3.18	3.73 4.10	0.01 0.04
(4) DB844H90E-XY	C	From Centroid-Leg	3.00 0.00 0.00	0.0000	120.00	No Ice 1/2" Ice	2.87 3.18	3.73 4.10	0.01 0.04
12' LP Platform	C	None		0.0000	110.00	No Ice 1/2" Ice	25.00 30.00	25.00 30.00	1.50 1.75
(2) LPA-80063/4CF	A	From Centroid-Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice	7.01 7.42	6.08 6.48	0.02 0.07
(2) LPA-80063/4CF	B	From Centroid-Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice	7.01 7.42	6.08 6.48	0.02 0.07
(2) LPA-80063/4CF	C	From Centroid-Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice	7.01 7.42	6.08 6.48	0.02 0.07
(2) DB950F85E-M	A	From Centroid-Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice	2.53 2.90	4.19 4.57	0.01 0.03
(2) DB950F85E-M	B	From Centroid-Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice	2.53 2.90	4.19 4.57	0.01 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)
(2) DB950F85E-M	C	From Centroid-Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice	2.53 2.90	4.19 4.57	0.01 0.03
GPS	C	From Centroid-Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice	0.17 0.24	0.17 0.24	0.00 0.00
742-213 w/Mount Pipe	A	From Face	0.50 0.00 0.00	30.0000	90.00	No Ice 1/2" Ice	5.42 5.95	4.63 6.02	0.05 0.09
742-213 w/Mount Pipe	B	From Face	0.50 0.00 0.00	30.0000	90.00	No Ice 1/2" Ice	5.42 5.95	4.63 6.02	0.05 0.09
742-213 w/Mount Pipe	C	From Face	0.50 0.00 0.00	30.0000	90.00	No Ice 1/2" Ice	5.42 5.95	4.63 6.02	0.05 0.09
2'-0" - STANDOFF	A	From Face	1.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	1.36 2.45	1.36 2.45	0.02 0.04
2'-0" - STANDOFF	B	From Face	1.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	1.36 2.45	1.36 2.45	0.02 0.04
GPS	A	From Face	2.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	0.17 0.24	0.17 0.24	0.00 0.00
GPS	B	From Face	2.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	0.17 0.24	0.17 0.24	0.00 0.00
2'-0" - STANDOFF	C	From Face	1.00 0.00 0.00	0.0000	50.00	No Ice 1/2" Ice	1.36 2.45	1.36 2.45	0.02 0.04
GPS	C	From Face	2.00 0.00 0.00	0.0000	50.00	No Ice 1/2" Ice	0.17 0.24	0.17 0.24	0.00 0.00

Section Capacity Table

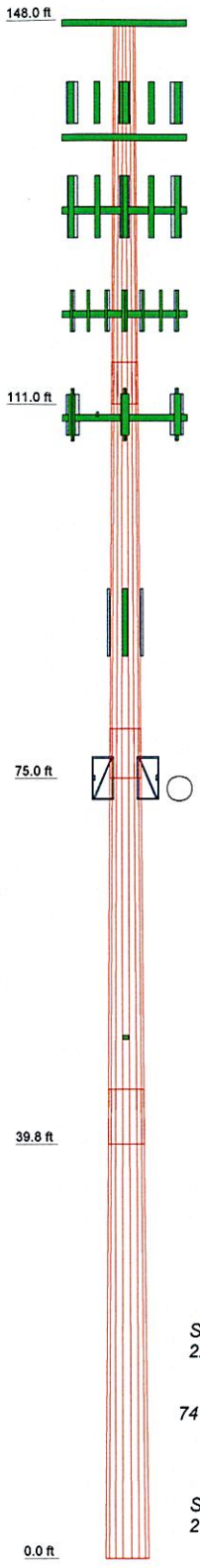
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	148 - 111	Pole	TP30.661x24x0.25	1	-7.96	1224.80	30.6	Pass
L2	111 - 75	Pole	TP36.643x29.4409x0.25	2	-13.94	1465.99	80.8	Pass
L3	75 - 39.75	Pole	TP42.489x35.2878x0.3125	3	-20.45	2126.08	90.5	Pass
L4	39.75 - 0	Pole	TP49.02x40.9188x0.375	4	-31.23	3010.03	91.7	Pass
							Summary	
						Pole (L4)	91.7	Pass
						RATING =	**91.7**	**Pass**

APPENDIX C

Tower Elevation Drawing

Section	1	2	3	4
Length (ft)	37.00	40.00	40.00	45.00
Number of Sides	18	18	18	18
Thickness (in)	0.2500	0.2500	0.3125	0.3750
Lap Splice (ft)	4.00	4.75	5.25	
Top Dia (in)	24.0000	29.4409	35.2878	40.9188
Bot Dia (in)	30.6610	36.6430	42.4890	49.0200
Grade	A607-65			
Weight (K)	2.7	3.5	5.2	8.1

19.6



AXIAL 38 K
SHEAR 22 K
MOMENT 2302 kip-ft
TORQUE 0 kip-ft
74 mph WIND - 0.5000 in ICE

AXIAL 31 K
SHEAR 26 K
MOMENT 2729 kip-ft
TORQUE 0 kip-ft
REACTIONS - 85 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
12' LP Platform	148	(2) LPA-80063/4CF	110
12' LP Platform	137	(2) LPA-80063/4CF	110
(3) DUO1417-8686	137	(2) LPA-80063/4CF	110
(3) DUO1417-8686	137	(2) DB950F85E-M	110
(3) DUO1417-8686	137	(2) DB950F85E-M	110
(3) TMA	137	(2) DB950F85E-M	110
(3) TMA	137	GPS	110
(3) TMA	137	742-213 w/Mount Pipe	90
12' LP Platform	130	742-213 w/Mount Pipe	90
(3) DB980	130	742-213 w/Mount Pipe	90
(3) DB980	130	2'-0" - STANDOFF	75
(3) DB980	130	2'-0" - STANDOFF	75
12' LP Platform	120	GPS	75
(4) DB844H90E-XY	120	GPS	75
(4) DB844H90E-XY	120	2'-0" - STANDOFF	50
(4) DB844H90E-XY	120	GPS	50
12' LP Platform	110		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

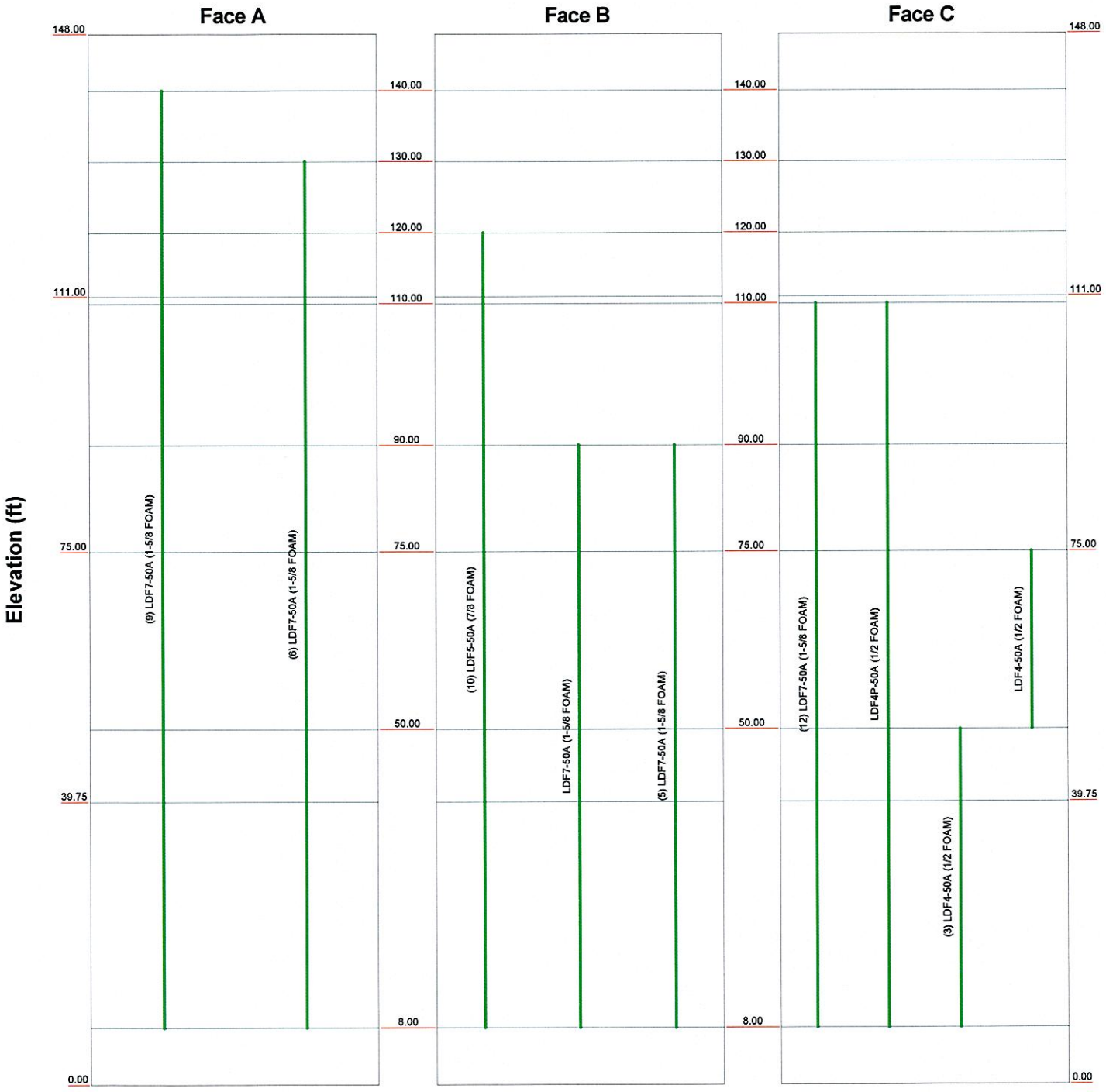
1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 60 mph wind.
5. TOWER RATING: 91.7%

GPD GROUP
GPD Group
520 South Main St. Suite 2531
Akron, OH 44311
Phone: (614) 210-0751
FAX: (614) 210-0752

Job: *14635 MIDDLETOWN SW*			
Project: *2008265.25*			
Client: AT&T Mobility	Drawn by: kdavis		App'd:
Code: TIA/EIA-222-F	Date: 12/08/08		Scale: NTS
Path: G:\Telecom\2008265\25\RISA\14635 Middletown SW.er			Dwg No. E-1

Feedline Distribution Chart
0' - 148'

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



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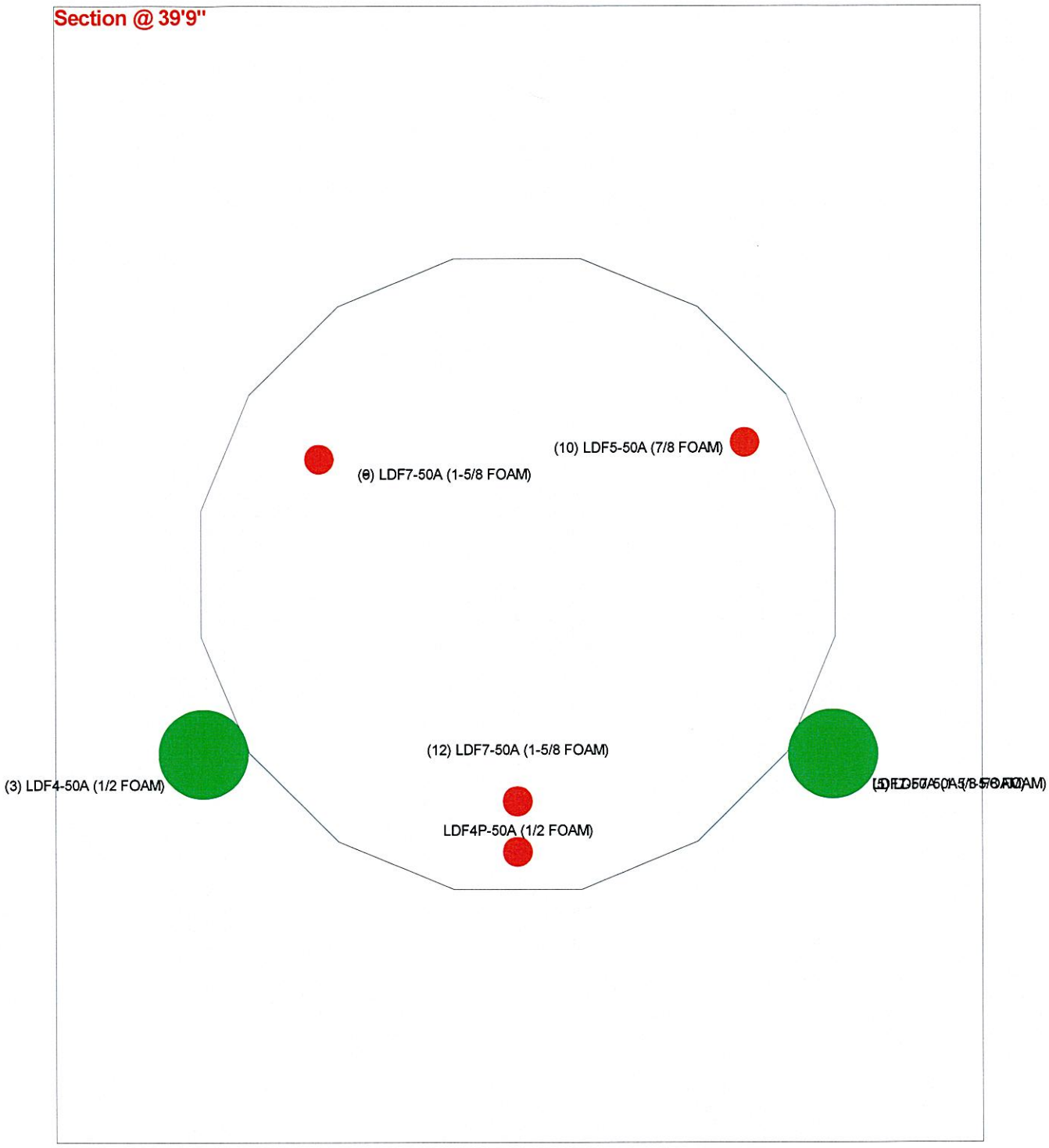
Job: 14635 MIDDLETOWN SW			
Project: 2008265.25			
Client: AT&T Mobility	Drawn by: kdavis	App'd:	
Code: TIA/EIA-222-F	Date: 12/08/08	Scale: NTS	
Path: G:\Telecom\2008265\25\RISA\14635 Middletown SW.er		Dwg No. E-7	

Feedline Plan
39'9"

Round Flat App In Face App Out Face



GPD GROUP
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Job: ***14635 MIDDLETOWN SW***			
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Client: AT&T Mobility	Drawn by: kdavis	App'd:	
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APPENDIX D

Anchor Rod & Base Plate Analysis

Anchor Rod and Base Plate Stresses

14635 MIDDLETOWN SW

Overturning Moment =	2728.77	k*ft
Axial Force =	31.23	k
Shear Force =	26.23	k

Anchor Rods		
Pole Diameter =	49.02	in
Number of Rods =	16	
Rod Grade (Fy) =	75	ksi
Rod Circle =	56	in
Rod Diameter =	2.25	in
Net Tensile Area =	3.25	in^2
0 Degrees		
Max Tension on Rod =	101.42	kips
Max Compression on Rod =	105.32	kips
45 Degrees		
Max Tension on Rod =	144.23	kips
Max Compression on Rod =	148.14	kips
Allow. Rod Force =	195.00	kips
Anchor Rod Capacity =	74.0%	**OK**

Base Plate		
Plate Strength (Fy) =	55	ksi
Plate Thickness =	3	in
Plate Width =	56	in
Est. Dist. b/w Rods =	18	in
w_{calc} =	27.46	in
e =	2.365	in
w_{max} =	30.18	in
w =	27.46	in
S =	41.19	in^3
fb =	34.02	ksi
Fb =	55	ksi
Base Plate Capacity =	61.9%	**OK**

APPENDIX E

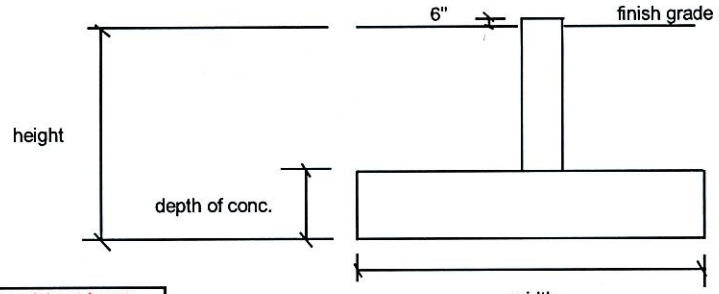
Foundation Analysis

PAD & PIER DESIGN - Monopole

14635 MIDDLETOWN SW

TOWER REACTIONS

total overturning moment =	2728.77	Kip-ft
total shear =	26.23	Kip
axial =	31.23	Kip
ground water table =	Below	ft



PAD DIMENSIONS

width =	22	ft
height =	8	ft
depth of conc =	3	ft
γ_{soil} =	0.100	kcf
γ_{conc} =	0.150	kcf

Spreadsheat Input
PCAMATS Input

Mr =	6115.20	k-ft
Mot =	2951.725	k-ft
P =	491.03	k
W_{wedge}	15.88	k
Allowable Bearing =	6	ksf

F.S. $_{OVERTURNING}$ = 2.0717383 ok > 1.5

F.S. $_{OVERTURNING}$ / F.S. $_{ALLOWABLE}$ = 72.4%

LOAD PERPENDICULAR TO PAD

Q_{MAX} = P/A+M/S= 2.6777808
Q_{MIN} = P/A-M/S= -0.64873122

width/6 = 3.67 M/P = 6.01 NG (width/6 < M/P), use Qmax

IF M/P>width/6

Qmax = 2.983 ksf
Qmin = 0.000 ksf

Q_{MAX}/Q_{ALL} = 49.7% OK

LOAD AT 45 DEGREES TO PAD

Q_{MAX} = P/A+M/S= 3.37080414
Q_{MIN} = P/A-M/S= -1.34175455

Verify max pressure in PCAMATS for this load case

Mx =	2087.185	
My =	2087.185	
e_X =	4.251	
ey =	4.251	
e_X/W =	0.193	NG (e/W > 1/6) use Qmax
e_Y/W =	0.193	NG (e/W > 1/6) use Qmax

IF e/W > 1/6

Q_{ALL} =	1230	kips
Q_{MAX} =	690.99	kips
Q_{MAX}/Q_{ALL} =	56.2%	OK

B_1 =	20.25	ft
L_1 =	20.25	ft

Foundation Capacity:	**72.4%**	**OK**