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

September 2, 2008

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

RE: **EM-VER-143-080717** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 136 Wright Road, Torrington, 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.

The proposed modifications are to be implemented as specified here and in your notice received on July 17, 2008, 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/cm

c: The Honorable Ryan J. Bingham, Mayor, City of Torrington
Martin Connor, City Planner, City of Torrington
Crown Castle

STATE OF CONNECTICUT

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Daniel F. Caruso
Chairman

August 25, 2008

Martin J. Connor, AICP
City Planner
City of Torrington
Municipal Building
140 Main Street
Torrington, CT 06790-5245

RE: **EM-VER-143-080717** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 136 Wright Road, Torrington, Connecticut.

EM-VER-143-080725 – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 1210 Highland Avenue, Torrington, Connecticut.

Dear Mr. Connor:

On July 17, 2008 and July 25, 2008, respectively, the Connecticut Siting Council (Council) received from Cellco Partnership d/b/a Verizon Wireless (Verizon Wireless) the above-noted notices of intent to modify existing telecommunications facilities at 136 Wright Road and 1210 Highland Avenue, Torrington. I am also in receipt of your letters dated July 29, 2008 and August 5, 2008 in which indicate your interest in reserving space on the above-noted telecommunications towers for municipal emergency services.

Please be advised that the applicant, Verizon Wireless, leases space on both towers as a tenant and does not own either tower. As such, Verizon Wireless does not control the reservation of tower space at either facility.

According to our records, Crown Castle USA, Inc. is the owner of the 136 Wright Road tower, and SBA Network Services, Inc. is the owner of the 1210 Highland Avenue tower. In light of this, I would recommend that the City of Torrington's (City) request(s) for tower space be provided in writing to the respective tower owner(s). Once an agreement is reached between the City and the tower owner(s), the co-location plans may be submitted to the Council for review and approval.

If I may be of any assistance in this matter, please do not hesitate to contact me.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP

c: Honorable Mayor Ryan Bingham, City of Torrington

City Of Torrington

PLANNING AND ZONING COMMISSION
140 Main Street
Torrington, CT 06790-5245

Tel.: (860) 489-2220
Fax: (860) 489-2550

July 29, 2008

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

ORIGINAL

Re: EM-VER-143-090717, Cellco Partnership d/b/a Verizon Wireless, 136 Wright Rd.

Dear Mr. Phelps:

Mayor Bingham asked me to respond to the notice received from you regarding a request from Cellco Partnership d/b/a Verizon Wireless to modify the existing telecommunications facility at 136 Wright Rd. I contacted our Police and Fire Departments regarding their needs in this area of the City. The City of Torrington Fire Department would like a spot reserved on the cell tower for future use. They have numerous "dead spots" in that area of the City. The Police and Fire Departments are in the process of updating their communications systems and looking at a combined dispatch. Please communicate our needs to the applicant.

If you have any questions, please call me at (860) 489-2220.

Sincerely yours,

Martin J Connor, AICP
City Planner

Mayor Ryan Bingham
John Field Jr., Fire Chief
Robert Milano, Police Chief

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

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Internet: ct.gov/csc

Daniel F. Caruso
Chairman

July 18, 2008

The Honorable Ryan J. Bingham
Mayor
City of Torrington
Municipal Building
140 Main Street
Torrington, CT 06790-5245

RE: **EM-VER-143-080717** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 136 Wright Road, Torrington, Connecticut.

Dear Mayor Bingham:

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 August 1, 2008.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Martin Connor, City Planner, City of Torrington

ROBINSON & CO' F

KENNETH C. BALDWIN

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

EM-VER-143-080717

ORIGINAL

January 17, 2008

Via Hand Delivery

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

Re: **Notice of Exempt Modification – Antenna Swap**
136 Wright Road, Torrington, Connecticut

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility at the above referenced location. The Council approved Cellco's shared use of this facility on October 14, 2003. Cellco intends to modify its installation by replacing six of its twelve PCS antennas with four (4) LPA-80080/6CF and two (2) LPA-80063/6CF cellular antennas at the 136-foot level on the 150-foot Crown Castle 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 Ryan J. Bingham, Mayor of the City of Torrington. Pursuant to a Council directive, a copy of this letter is also being sent to James N. & Carol E. Wright, the owners of the property on which the facility is located.

The planned modifications to the facility falls 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 structures. Cellco's replacement antennas will be located at the same height and location as the existing antennas.

2. The proposed modifications will not involve any 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 the facility is included behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower can support the proposed 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:
Ryan J. Bingham, Mayor of Torrington
James N. & Carol E. Wright
Sandy M. Carter

Vertically Polarized, Log Periodic 80° / 14 dBd

LPA-80080/6CF ___

When ordering replace "___" with connector type.

Mechanical specifications

	Length	1800 mm	70.9	in
	Width	140 mm	5.5	in
	Depth	335 mm	13.2	in
	Depth with z-bracket	375 mm	14.8	in
4)	Weight	9.5 kg	21.0	lbs
	Wind Area			
	Fore/Aft	0.25 m^2	2.7	ft^2
	Side	0.60 m^2	6.5	ft^2
	Rated Wind Velocity (Safety factor 2.0)	>295 km/hr	>183	mph
	Wind Load @ 100 mph (161 km/hr)			
	Fore/Aft	415 N	93.3	lbs
	Side	870 N	195.6	lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

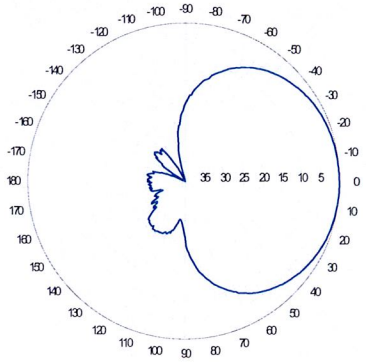
Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

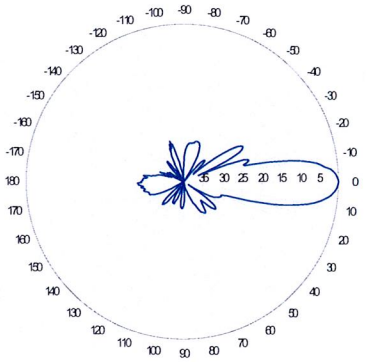
Electrical specifications

	Frequency Range	806-960 MHz
	Impedance	50Ω
3)	Connector(s)	NE or E-DIN 1 port / center
1)	VSWR	≤ 1.4:1
	Polarization	Vertical
1)	Gain	14 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	80°
	E-Plane	10°
1)	Electrical Downtilt	0°
1)	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern[1)]



Horizontal

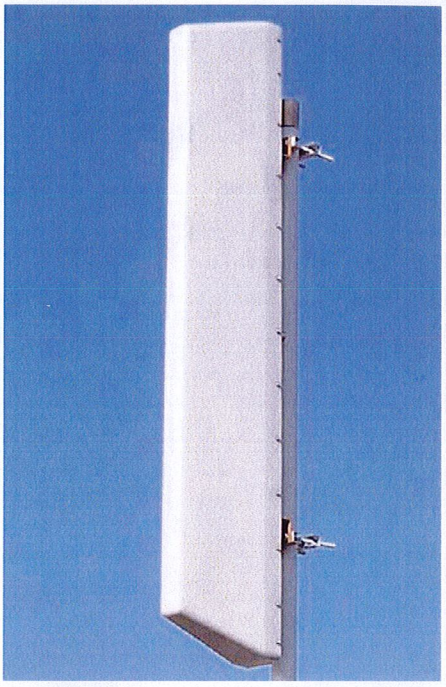


Vertical

Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

CF Denotes a Center-Fed Connector.

806-960 MHz

1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Amphenol Antel, Inc. The Antenna Technology Company

Revision Date: 7/5/07

Vertically Polarized, Log Periodic 63° / 14.5 dBd

LPA-80063/6CF ___

When ordering replace "___" with connector type.

Mechanical specifications

	Length	1800 mm	70.9	in
	Width	380 mm	15.0	in
	Depth	332 mm	13.1	in
	Depth with z-bracket	372 mm	14.6	in
4)	Weight	12.3 kg	27.0	lbs
	Wind Area			
	Fore/Aft	0.68 m^2	7.4	ft^2
	Side	0.60 m^2	6.5	ft^2
	Rated Wind Velocity (Safety factor 2.0)	>235 km/hr	>146	mph
	Wind Load @ 100 mph (161 km/hr)			
	Fore/Aft	993 N	223.3	lbs
	Side	872 N	196.1	lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

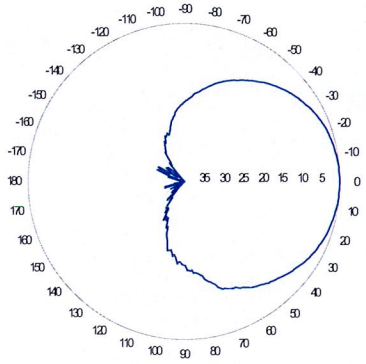
Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

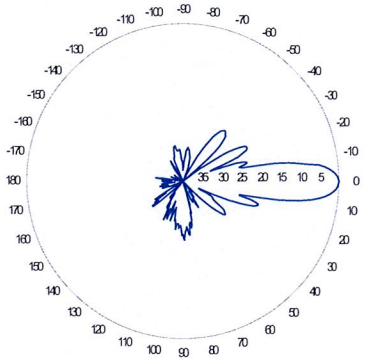
Electrical specifications

	Frequency Range	806-960 MHz
	Impedance	50Ω
3)	Connector(s)	NE or E-DIN 1 port / center
1)	VSWR	≤ 1.4:1
	Polarization	Vertical
1)	Gain	14.5 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	63°
	E-Plane	10°
1)	Electrical Downtilt	0°
1)	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern[1)]



Horizontal

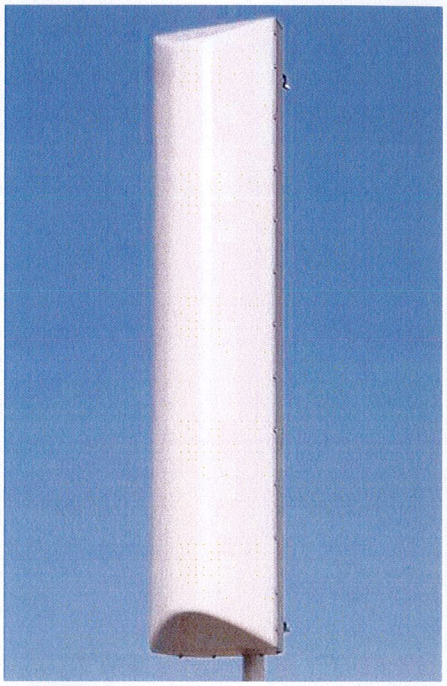


Vertical

Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



3t technology

Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

CF Denotes a Center-Fed Connector.

806-960 MHz

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Amphenol Antel, Inc. The Antenna Technology Company

Revision Date: 7/5/07

	General	Power	Density					
Site Name: Torrington West								
Tower Height: Verizon @ 136ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Sprint	11	122	148	0.0220	1960	1.0000	2.20%	
Verizon	**9**	**485**	**136**	**0.0849**	**1970**	**1.0000**	8.49%	
Verizon	**9**	**200**	**136**	**0.0350**	**875**	**0.5830**	6.00%	
								16.69%
* Source: Siting Council								

Date: July 15, 2008

GPD ASSOCIATES

Ben Goodhart
Crown Castle USA, Inc.
9105 Monroe Rd., Suite 150
Charlotte, NC 28270
(704) 321-3845

GPD Associates
520 South Main St., Suite 2531
Akron, Ohio 44311
(330) 572-2114
tbowman@gpdgroup.com

Subject:	**Structural Analysis Report**	
Carrier Designation	**Verizon Co-locate** **Verizon Site Name:**	 **Torrington West**
Crown Castle Designation	**Crown Castle BU Number:** **Crown Castle Site Name:** **Crown Castle JDE Number:**	**876373** **Long Eddy / Wright Property** **98297**
GPD Associate Designation	**GPD Associates Project Number:**	**2008275.13**
Site Data	**136 Wright Rd., Torrington, CT 06790** **Latitude 41° 49' 38.34", Longitude -73° 10' 13.97"** **148' Summit Monopole**	

Dear Mr. Goodhart,

GPD is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 294364, in accordance with application 56569, revision 0. The purpose of the analysis is to determine the suitability of the tower with the existing and reserved loading configurations.

This analysis has been performed in accordance with the TIA/EIA-222-F standard and the Connecticut Building Code based upon a wind speed condition of 80 mph. Based on our analysis we have determined the **tower and its foundation are sufficient** for the existing and reserved loadings as referenced in Table 1.

We at GPD appreciate the opportunity of providing our continuing professional services to you and Crown Castle USA, Inc. 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

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The purpose of this analysis was to verify that the existing structure is capable of carrying the proposed loading configuration as specified by Verizon Wireless to Crown Castle USA, Inc. This report was commissioned by Mr. Ben Goodhart of Crown Castle USA, Inc.

The existing monopole is structurally satisfactory for the proposed loading configuration for a basic wind speed of 80 mph with ½" radial ice (25% reduction) in accordance with TIA/EIA-222-F and the Connecticut Building Code. The tower rating/capacity is 63.7%.

The foundation reactions, with the proposed loading, were found to be 63.8% of the original design reactions. If the existing foundation was properly designed for the original reactions, then it is our opinion that the foundation is adequate.

ANALYSIS CRITERIA

The current requirements of TIA/EIA-222-F and the Connecticut Building Code are for a basic wind speed of 80 mph with ½" of radial ice. A 25% reduction in wind load is allowed when wind and ice are applied simultaneously. TIA/EIA-222-F requires towers within Litchfield County, Connecticut be analyzed with an 80 mph wind speed.

Table 1 – Existing and Reserved Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Type	Number Of Feed Lines	Feed Line Size (inches)
153	1 (SLA)	RFS/Celwave	PD1109E	15' LP Platform	1	7/8
148*	9	Decibel	DB980H90E-M		9	1-5/8
136	4	Antel	LPA-80080/6CF	15' LP Platform	4	1-5/8
	2	Antel	LPA-80063/6CF		2	1-5/8
	4	Decibel	DB950F85E-M		4	1-5/8
	2	Decibel	DB950F65E-M		2	1-5/8
88	1	RFS/Celwave	PD1109E	4' Standoff	1	1/2
45	1		GPS	4' Standoff	1	1/2
14	1		GPS	4' Standoff	1	1/2

* Both the MLA and Existing Loading scenarios were considered. The MLA Loading was found to control the analysis.

TOWER DESCRIPTION

The existing monopole has eighteen sides and is evenly tapered from 48.19" (flat-flat) at the base to 24.0" (flat-flat) at the top. The tower consists of four major sections connected with slip joints. The existing tower is galvanized and has no tower lighting.

The tower was originally designed for Sprint PCS by Summit Manufacturing, Inc. of West Hazleton, Pennsylvania for a 90 mph wind speed with ½" radial ice (25% reduction) in accordance with TIA/EIA-222-F 1996.

ANALYSIS PROCEDURE

Table 3 – Documents Provided

Document	Remarks	Reference	Source
Manufacturer Drawings	Summit Job #: 10186, dated 6/23/00	Doc ID # 1631601	Crown DMZ
Foundation Drawings	Summit Job #: 10186, dated 6/26/00	Doc ID # 1634518	Crown DMZ
Geotechnical Report	Clarence Welti Associates, Inc. Site #: 33XC078, dated 5/12/00	Doc ID # 1531964	Crown DMZ

Analysis Methods

RISA Tower (Version 5.2.0.1), a commercially available software program, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. All loads were computed in accordance with the ANSI/EIA/TIA-222-F and all local building code requirements. Selected output from the analysis is included in Appendix A.

Assumptions

1. Tower and structures were built in accordance with the manufacturer's specifications.
2. The tower and structures have been maintained in accordance with manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 & 2 and the referenced drawings.

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.

ANALYSIS RESULTS

Table 4 – Tower Summary

Notes	Member	Strength (KSI)	Capacity	Elevation (feet)	Results
	Pole (L1)	60	35.1%	116.5 – 148	Pass
	Pole (L2)	65	57.8%	80.3 – 116.5	Pass
	Pole (L3)	65	63.6%	39.8 – 80.3	Pass
	Pole (L4)	65	63.7%	0 – 39.8	Pass
1	Base Plate	55	63.1%		Pass
1	Anchor Rods	75	50.3%		Pass
	Foundation	O.T.M.	63.8% of Original Design		Pass
Structure Rating: 63.8%					

1) See additional documentation in Appendix D for calculations supporting the % capacity used.

Recommended Modifications

The design of the tower and its foundation are satisfactory for the proposed loads and do not require modifications.

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 plum.

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

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 Litchfield County, Connecticut.
Basic wind speed of 80 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 69 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
LDF5-50A (7/8 FOAM)	A	No	Inside Pole	148.00 - 8.00	1	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
LDF7-50A (1-5/8 FOAM)	B	No	Inside Pole	148.00 - 8.00	9	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	136.00 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	83.00 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	45.00 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
LDF4-50A (1/2 FOAM)	A	No	CaAa (Out Of Face)	14.00 - 8.00	1	No Ice	0.06	0.15
						1/2" Ice	0.16	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
PD1109E	C	From Leg	4.00 0.00 5.00	0.0000	148.00	No Ice 1/2" Ice	2.85 3.92	2.85 3.92	0.02 0.04
PiROD 15' Low Profile Platform	C	None		0.0000	148.00	No Ice 1/2" Ice	17.30 22.10	17.30 22.10	1.50 2.03
(3) FV65-14-00NA2 w/Mount Pipe	A	From Centroid-Leg	4.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice	8.64 9.29	6.95 8.13	0.06 0.12
(3) FV65-14-00NA2 w/Mount Pipe	B	From Centroid-Leg	4.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice	8.64 9.29	6.95 8.13	0.06 0.12
(3) FV65-14-00NA2	C	From	4.00	0.0000	148.00	No Ice	8.64	6.95	0.06

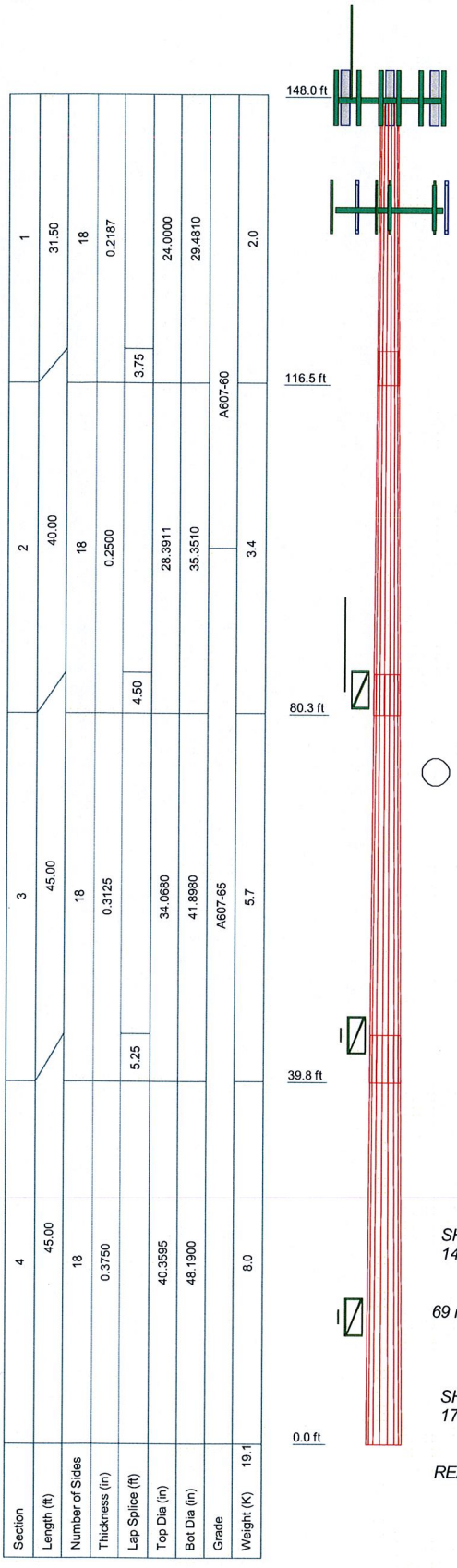
Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
w/Mount Pipe		Centroid-Leg	0.00 0.00			1/2" Ice	9.29	8.13	0.12
PiROD 15' Low Profile Platform	C	None		0.0000	136.00	No Ice 1/2" Ice	17.30 22.10	17.30 22.10	1.50 2.03
(2) DB950F85E-M w/Mount Pipe	A	From Centroid-Leg	3.76 1.37 0.00	20.0000	136.00	No Ice 1/2" Ice	3.25 3.83	5.90 7.01	0.04 0.08
(2) DB950F65E-M w/Mount Pipe	B	From Centroid-Leg	3.76 1.37 0.00	10.0000	136.00	No Ice 1/2" Ice	6.60 7.27	5.90 7.01	0.04 0.10
(2) DB950F85E-M w/Mount Pipe	C	From Centroid-Leg	3.76 1.37 0.00	20.0000	136.00	No Ice 1/2" Ice	3.25 3.83	5.90 7.01	0.04 0.08
(2) LPA-80080/6CF w/Mount Pipe	A	From Centroid-Leg	3.76 1.37 0.00	20.0000	136.00	No Ice 1/2" Ice	4.59 5.14	6.84 8.02	0.04 0.09
(2) LPA-80080/6CF w/Mount Pipe	B	From Centroid-Leg	3.76 1.37 0.00	10.0000	136.00	No Ice 1/2" Ice	4.59 5.14	6.84 8.02	0.04 0.09
(2) LPA-80080/6CF w/Mount Pipe	C	From Centroid-Leg	3.76 1.37 0.00	20.0000	136.00	No Ice 1/2" Ice	4.59 5.14	6.84 8.02	0.04 0.09
Pirod 4' Side Mount Standoff (1)	C	From Leg	2.00 0.00 0.00	0.0000	83.00	No Ice 1/2" Ice	2.72 4.91	2.72 4.91	0.05 0.09
PD1109E	C	From Leg	4.00 0.00 5.00	0.0000	83.00	No Ice 1/2" Ice	2.85 3.92	2.85 3.92	0.02 0.04
Pirod 4' Side Mount Standoff (1)	C	From Leg	2.00 0.00 0.00	0.0000	45.00	No Ice 1/2" Ice	2.72 4.91	2.72 4.91	0.05 0.09
Generic GPS	C	From Leg	4.00 0.00 0.00	0.0000	45.00	No Ice 1/2" Ice	0.21 0.32	0.21 0.32	0.02 0.02
Pirod 4' Side Mount Standoff (1)	C	From Leg	2.00 0.00 0.00	0.0000	14.00	No Ice 1/2" Ice	2.72 4.91	2.72 4.91	0.05 0.09
Generic GPS	C	From Leg	4.00 0.00 0.00	0.0000	14.00	No Ice 1/2" Ice	0.21 0.32	0.21 0.32	0.02 0.02

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	148 - 116.5	Pole	TP29.481x24x0.2187	1	-5.51	953.02	35.1	Pass
L2	116.5 - 80.25	Pole	TP35.351x28.3911x0.25	2	-9.44	1415.67	57.8	Pass
L3	80.25 - 39.75	Pole	TP41.898x34.068x0.3125	3	-15.83	2097.24	63.6	Pass
L4	39.75 - 0	Pole	TP48.19x40.3595x0.375	4	-25.71	2958.67	63.7	Pass
							Summary	
						Pole (L4)	63.7	Pass
						RATING =	**63.7**	**Pass**

APPENDIX B

Tower Elevation Drawing



Section	1	2	3	4
Length (ft)	31.50	40.00	45.00	45.00
Number of Sides	18	18	18	18
Thickness (in)	0.2187	0.2500	0.3125	0.3750
Lap Splice (ft)	3.75	4.50	5.25	
Top Dia (in)	24.0000	28.3911	34.0680	40.3595
Bot Dia (in)	29.4810	35.3510	41.8980	48.1900
Grade	A607-60		A607-65	
Weight (K) 19.1	2.0	3.4	5.7	8.0

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
PD1109E	148	(2) LPA-80080/6CF w/Mount Pipe	136
PiROD 15' Low Profile Platform	148	(2) LPA-80080/6CF w/Mount Pipe	136
(3) FV65-14-00NA2 w/Mount Pipe	148	(2) LPA-80080/6CF w/Mount Pipe	136
(3) FV65-14-00NA2 w/Mount Pipe	148	Pirod 4' Side Mount Standoff (1)	83
(3) FV65-14-00NA2 w/Mount Pipe	148	PD1109E	83
PiROD 15' Low Profile Platform	136	Pirod 4' Side Mount Standoff (1)	45
(2) DB950F85E-M w/Mount Pipe	136	Generic GPS	45
(2) DB950F65E-M w/Mount Pipe	136	Pirod 4' Side Mount Standoff (1)	14
(2) DB950F85E-M w/Mount Pipe	136	Generic GPS	14

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-60	60 ksi	75 ksi	A607-65	65 ksi	80 ksi

TOWER DESIGN NOTES

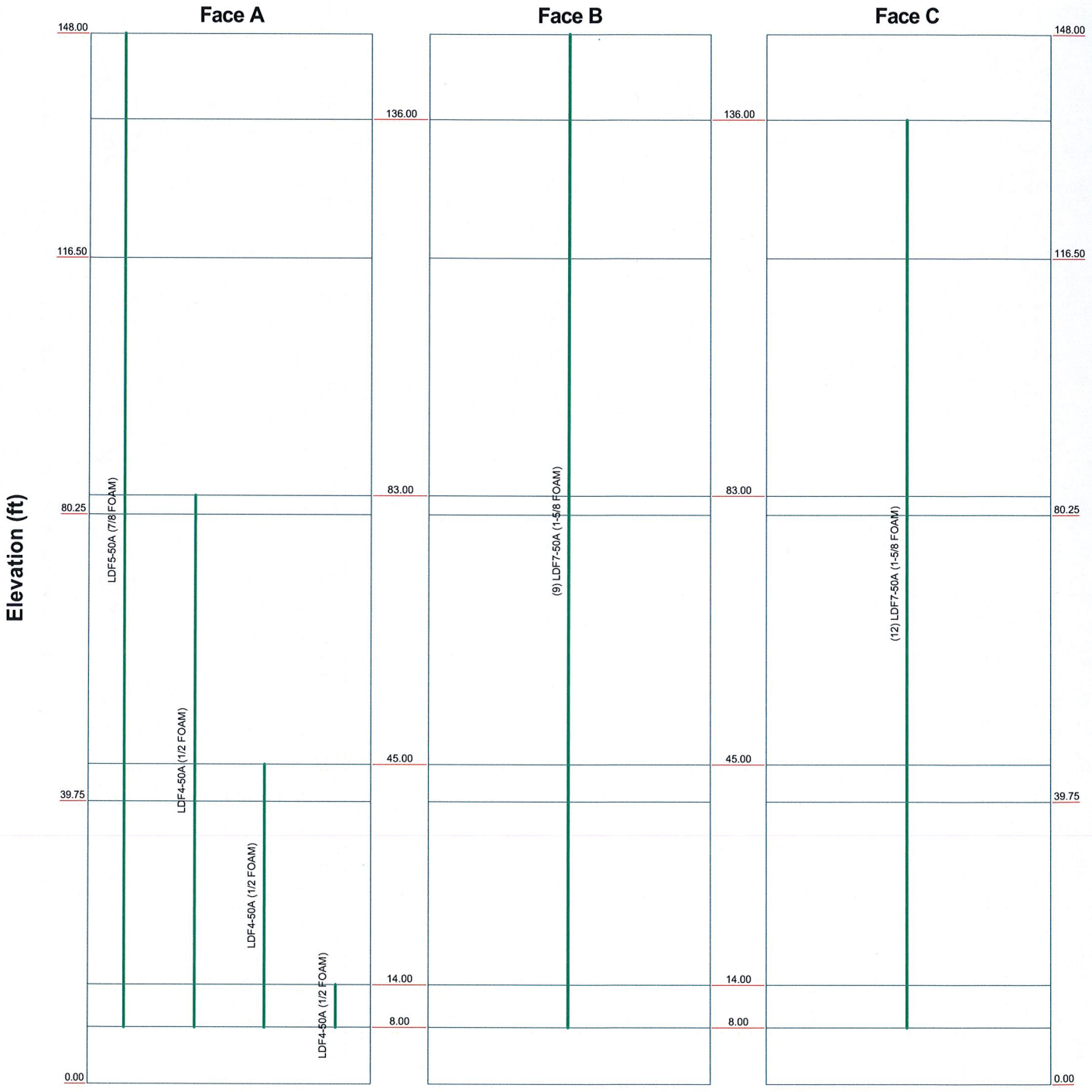
1. Tower is located in Litchfield County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 63.7%

GPD Associates
520 South Main St.; Suite 2531
Akron, OH 44311
Phone: (330) 572-2100
FAX: (330) 572-2101

Job: Long Eddy/Wright Property, BU#: 876373			
Project: 2008275.13			
Client: Crown Castle	Drawn by: tbowman	App'd:	
Code: TIA/EIA-222-F	Date: 07/15/08	Scale: NTS	
Path: G:\Telecom\2008275\13\visa\876373mla.eri		Dwg No. E-1	

Feedline Distribution Chart
0' - 148'

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



GPD Associates
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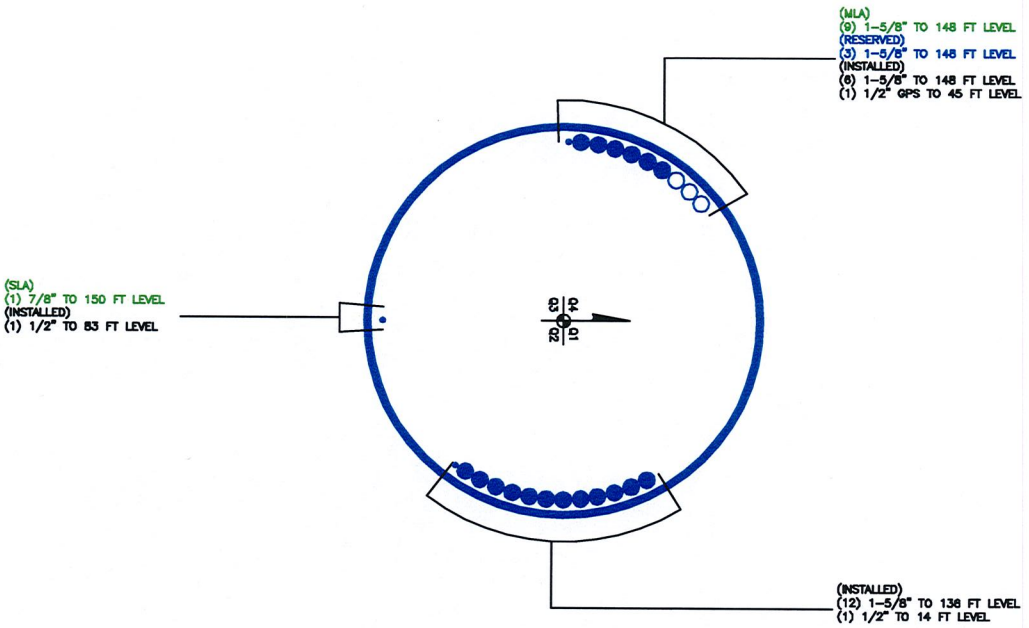
Job: **Long Eddy/Wright Property, BU#: 876373**		
Project: **2008275.13**		
Client: Crown Castle	Drawn by: tbowman	App'd:
Code: TIA/EIA-222-F	Date: 07/15/08	Scale: NTS
Path: G:\Telecom\2008275\13\visa\876373mla.eri		Dwg No. E-7

APPENDIX C

Base Level Drawing



: SCALE :

BUSINESS UNIT: 876373 TOWER ID: C_BASELEVEL

LEGEND: FEEDLINES

- SOLID BLUE CIRCLE DENOTES EXISTING FEEDLINE
- OPEN RED CIRCLE DENOTES PROPOSED FEEDLINE
- OPEN BLUE CIRCLE DENOTES RESERVED FEEDLINE
- X BLUE "X" DENOTES LOCATION NOT GIVEN

NOTE: ASSUME FEEDLINE ATTACHMENT HEIGHT TO TOWER STEEL AT 8-FEET ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED

BASE LEVEL DRAWING

SCALE: 1" = 1'-0" | 1

08/01/08 REF BASED PER WORK ORDER # 1458354 YNR
07/07/08 AS-BUILT INFORMATION ADDED PER WORK ORDER # 514459 MF

DRAWN BY: YNR
CHECKED BY: AKS
DRAWING DATE: 09/01/08

SITE NUMBER:
SITE NAME:

SITE NAME

LONG EDDY/ WRIGHT PROPERTY

BUSINESS UNIT NUMBER

876373

SITE ADDRESS

136 WRIGHT RD.
TORRINGTON, CT 06790
LITCHFIELD COUNTY
USA

SHEET TITLE

BASE LEVEL

SHEET NUMBER

A1-0

APPENDIX D

Anchor Rod & Base Plate Analysis

Anchor Rod and Base Plate Stresses

Southington, Smoron BU# 876334

Overturning Moment =	1827	k*ft
Axial Force =	25.71	k
Shear Force =	17.46	k

Anchor Rods		
Pole Diameter =	48.19	in
Number of Rods =	16	
Rod Grade (Fy) =	75	ksi
Rod Circle =	55	in
Rod Diameter =	2.25	in
Net Tensile Area =	3.25	in^2
0 Degrees		
Max Tension on Rod =	68.86	kips
Max Compression on Rod =	72.07	kips
45 Degrees		
Max Tension on Rod =	98.05	kips
Max Compression on Rod =	101.26	kips
Allow. Rod Force =	195.00	kips
Anchor Rod Capacity =	50.3%	**OK**

Base Plate		
Plate Strength (Fy) =	55	ksi
Plate Thickness =	2.75	in
Plate Width =	54	in
Est. Dist. b/w Rods =	12	in
w_{calc} =	21.12	in
e =	2.28	in
w_{max} =	28.178	in
w =	21.12	in
S =	26.62	in^3
fb =	34.69	ksi
Fb =	55	ksi
Base Plate Capacity =	63.1%	**OK**