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@po.state.ct.us
Web Site: www.ct.gov/csc

February 20, 2004

Michele G. Briggs
Manager of Real Estate
Southwestern Bell Mobile Systems, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-143-040213** - Southwestern Bell Mobile Systems, LLC notice of intent to modify an existing telecommunications facility located at 1925-1931 East Main Street, Torrington, Connecticut.

Dear Ms. Briggs:

At a public meeting held on February 18, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated February 13, 2004. 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. 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,

Pamela B. Katz, P.E.
Chairman

PBK/laf

c: Honorable Owen J. Quinn, Jr., Mayor, City of Torrington
Martin Connor, City Planner, City of Torrington
Bryan Wilson, SBA, Inc.
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae LLP
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Thomas F. Flynn III, Nextel Communications, Inc.
Sandy M. Carter, Verizon Wireless

G:em\cing\torrington\dc021804.doc

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February 13, 2004

Honorable Owen J. Quinn, Jr.
Mayor
City of Torrington
140 Main Street
Torrington, CT 06790-5245

RE: **EM-CING-143-040213** - Southwestern Bell Mobile Systems, LLC notice of intent to modify an existing telecommunications facility located at 1925-31 East Main Street, Torrington, Connecticut.

Dear Mayor Quinn:

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.

The Council will consider this item at the next meeting scheduled for February 18, 2004, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

SDP/ekz

S. Derek Phelps
Executive Director

SDP/cm

Enclosure: Notice of Intent
Agenda

c: Martin Connor, City Planner, City of Torrington

EM-CING-143-040213

Michele G. Briggs
Manager of Real Estate

February 13, 2004

Ms. Pam Katz, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: **Notice of Exempt Modification – Existing SBA Telecommunications Tower Facility at 1925 - 1931 East Main Street, Torrington, Connecticut**

Dear Chairman Katz:

Southwestern Bell Mobile Systems, LLC ("SBMS") intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower off East Main Street in Torrington, Connecticut.

The Torrington facility is located at 1925 - 1931 East Main Street, which is just northeast of the intersection of US Hwy 202 with CT Rte 183, and behind a shopping center. Tower coordinates (NAD 83) are N 41° 49' 23" and W 73° 04' 37". The facility is owned and operated by SBA Properties, Inc. ("SBA"), 5900 Broken Sound Parkway NW, Boca Raton, FL 33487. SBA leases the land from TEP, Inc. of Torrington.

Please accept this letter as notification to the Council, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter is being sent to the Mayor of Torrington.

SBMS, the local component of the nationwide Cingular Wireless network, is licensed by the Federal Communications Commission ("FCC") to provide cellular mobile telephone service in the Litchfield, CT Rural Statistical Area, which includes the area to be served by SBMS' proposed installation. The public need for cellular service has been predetermined by the FCC.

SBA has agreed to plans put forth by SBMS pursuant to mutually acceptable terms and conditions and has also authorized SBMS to obtain necessary government approvals. Attached to this Notice are a site location map, a proposed site plan, the proposed tower profile, and a structural analysis report that shows the tower is structurally capable of supporting the proposed SBMS telecommunications equipment.

The SBA facility was approved by local zoning authorities on August 9, 2000, which was prior to the November 20, 2000 Covello decision concerning Council and Town jurisdiction for tower siting. The tower came under Council jurisdiction with Voicestream's application to co-locate in TS-VOICESTREAM-143-001102, which was approved on November 14, 2000.

The East Main Street facility consists of a 153-foot monopole within a roughly 60' x 60' compound surrounded by a 6-ft high chain link fence topped by barbed wire. Sprint, Nextel, T-Mobile, and Verizon operate antennas and associated equipment at the facility.

As shown on the attached drawings and as further described below, SBMS proposes to install up to twelve CSS DUO-1417-8686 panel antennas, approximately 48 inches in height, with the center of radiation approximately 95 feet above ground level. Associated equipment to be installed on the tower are up to six dual-band tower top amplifiers ("TTA's"; small metal boxes approximately 26 pounds apiece) immediately behind the antennas, and up to three very small (5 pounds apiece) CSS dual-band "combiners." SBMS also proposes to place a 12' x 20' prefabricated concrete equipment building at the base of the tower. All work will be done inside the existing fenced compound.

With the "GSM-only" configuration, SBMS will broadcast up to:

- 2 channels, 296 Watts ERP, 880 – 894 MHz; and
- 2 channels, 427 Watts ERP, 1930 – 1935 MHz.

Statutory Considerations

The changes to the Torrington tower facility do not constitute a modification as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2) because they will not result in any substantial adverse environmental effect.

1. The height of the overall structure will be unaffected.

2. The proposed changes will not affect the property boundaries. All new construction will take place on property leased by SBA and within the existing fenced compound.

3. The proposed additions will not increase the noise level at the existing facility by six decibels or more.

4. Operation of the additional antennas will not increase the total radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the FCC. The "worst-case" exposure calculation in accordance with FCC OET Bulletin No. 65 (1997) for a point of interest at the base of the tower in relation to the operation of the currently proposed antenna array is as

follows:

Company	Centerline Height (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density† (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Sprint *	152	1930	11	122	0.0209	1.0000	2.09
Nextel *	143	851	9	100	0.0158	0.5673	2.79
T-Mobile *	133	1930	4	300	0.0244	1.0000	2.44
Verizon *	123	1970	3	200	0.0143	1.0000	1.43
City of Torrington	100	Estimated – could not obtain actual numbers					5.00
Cingular	95	880 - 894	2	296	0.0236	0.5867	4.02
Cingular	95	1930 - 1935	2	427	0.0340	1.0000	3.40
Total							**21.17%**

* Power density parameters taken from applications to the Council: TS-VOICESTREAM-143-001102 and EM-VER-143-031001.

† Please note that the standard power density equation provided by the Council in its memo of January 22, 2001 incorporates a ground reflection factor of 2.56 (i.e., the square of 1.6) as described in FCC OET Bulletin No. 65.

As the table demonstrates, the cumulative "worst-case" exposure would be on the order of 21% of the ANSI/IEEE standard, as calculated for mixed frequency sites, including a conservative estimate for the City of Torrington antennas. Total power density levels resulting from SBMS' use of the tower facility would thus be within applicable standards.

For the foregoing reasons, SBMS respectfully submits that proposed changes to implement expanded shared use at the Torrington site constitute an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 513-7700 or Steve Levine at (860) 513-7636 with questions concerning this application. Thank you for your consideration in this matter.

Respectfully yours,

Michele G. Briggs
Manager of Real Estate

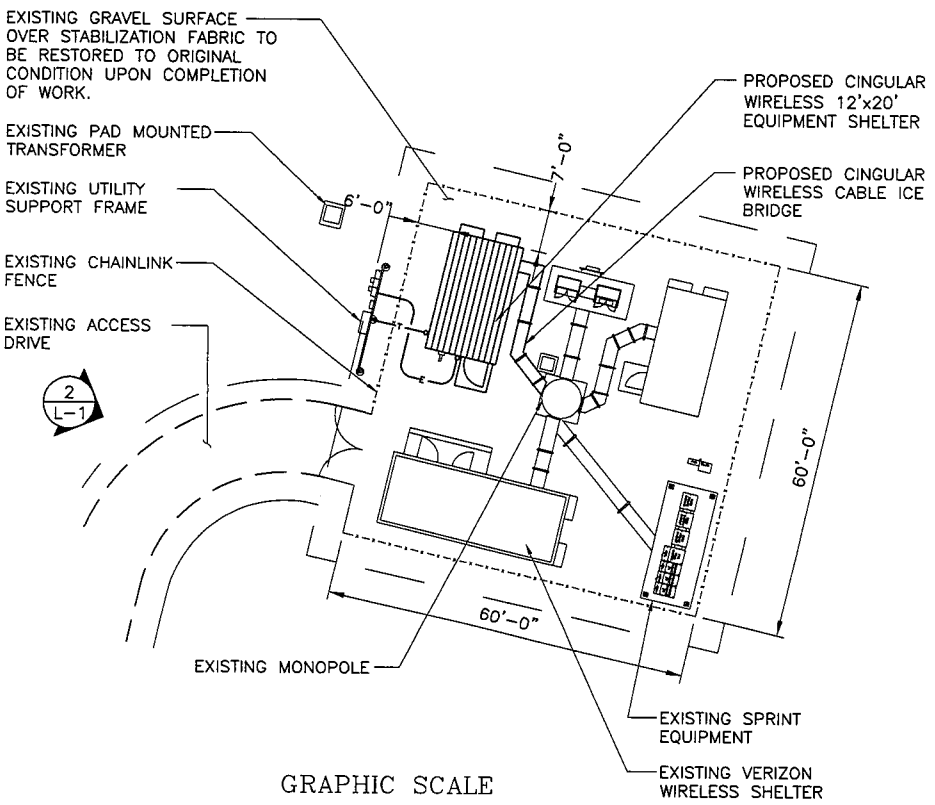
Enclosures

cc: Honorable Owen J. Quinn, Jr., Mayor, City of Torrington

Torrington - SBA - East Main St.

LEASE EXHIBIT

THIS LEASE PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF SITE SURVEY AND FACILITY DESIGN.



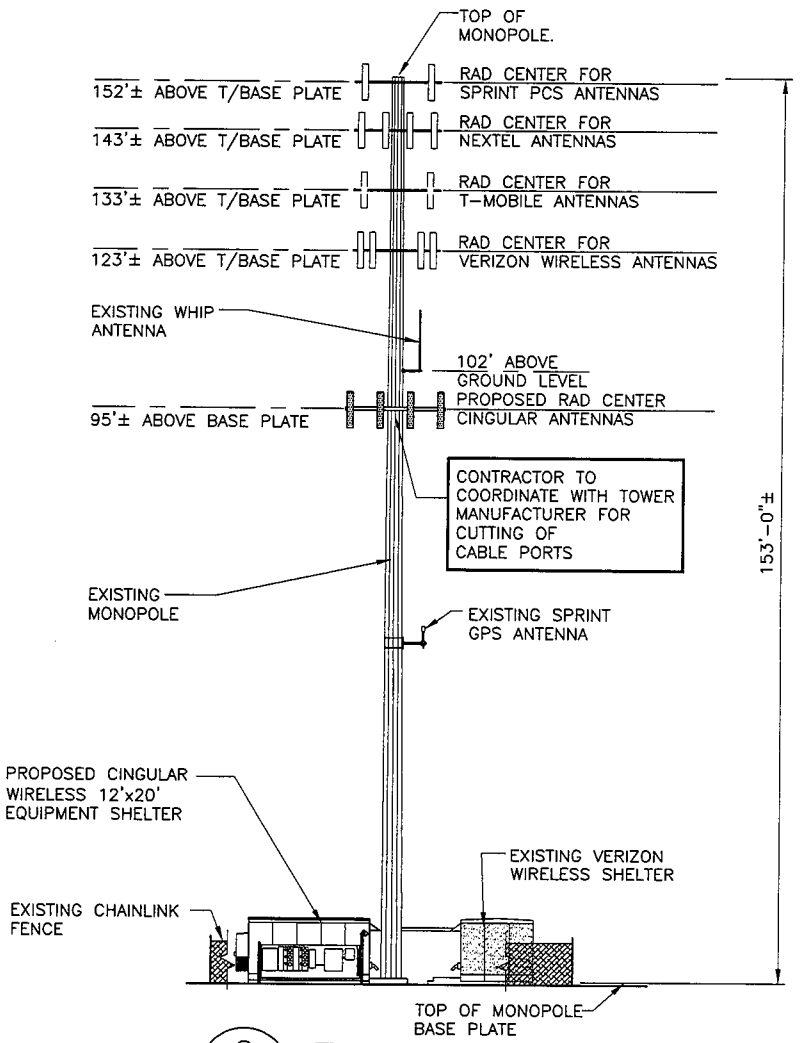
GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

1 L-1 **COMPOUND PLAN**
SCALE: 1" = 20'-0"

TRUE NORTH



2 L-1 **TOWER ELEVTION**
SCALE: 1" = 30'-0"

DESIGNED BY: JBA
DRAWN BY: JBA
CHK'D BY: AAJ

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	02/05/04	CAS	AAJ	REVISED LEASE EXHIBIT
0	01/30/04	JBA	AAJ	LEASE EXHIBIT

PROFESSIONAL ENGINEER SEAL

cingular WIRELESS

Natcomm, LLC
83-2 North Branford Road
Branford, CT 06405
Tel (203) 488-0580 Fax (203) 488-8587
Consulting Engineers Project Management
Site Acquisition Architectural Services

CINGULAR WIRELESS
PROPOSED WIRELESS COMMUNICATIONS FACILITY
CT
TORRINGTON
925-1001 EAST MAIN STREET
TORRINGTON, CONNECTICUT 06470

DATE: 01/23/04
SCALE: AS NOTED
JOB NO. 04018

LEASE EXHIBIT

L-1

Sheet No. 1 of 1

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NEW

Date 2/2/04

Mr. Tim Rosa
SBA Network Services
2490 Bruen Lane
Easton, PA 18040
O: (610) 252-1944

Sterling Engineering & Design Group, Ltd.
7171 Hwy 6 N, Ste 130, Houston, Texas 77095
(P) 281/583-7088 (F) 281/583-5495
Email: Dbrick@sedg.net

Subject: Structural Analysis Report – Our Project Number: 061-280

Carrier Identification	Cingular Carrier Site Name: Carrier Site I.D. Number:	SBA Site Name: Torrington SBA Site I.D. Number: CT01499-S
Site Data	1925-1931 East Main Street, Torrington, CT 06790 (Litchfield County) Latitude 41°-49'-23", Longitude 73°-4'-36" 280 Foot – Monopole	

Dear Tim:

Sterling Engineering 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 SBA Network Services request for an analysis and associated proposal. The purpose of the analysis is to determine the suitability of the tower for the addition of proposed equipment when combined with the existing equipment on the structure. This analysis has been performed in accordance with the TIA/EIA 222-F standard and local code requirement wind speed. Based on our analysis we have determined the **Tower Structure and Foundation is Adequate** for the proposed loading. We at Sterling Engineering appreciate the opportunity of providing our continuing professional services to you and SBA Network Services. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,
Sterling Engineering and Design Group, Ltd.

Sandeep N. Patel, P.E.,S.E.

Attachments:
Elevation Drawing
Feedline Distribution Diagram
Deflection Diagram
Tower Details

STATE OF CONNECTICUT
SANDEEP PATEL
No. 22079
LICENSED
PROFESSIONAL ENGINEER

2.2.04

TABLE OF CONTENTS

INTRODUCTION

The 165' monopole is manufactured by Fred A Nudd Corporation. The structural design information for this tower was obtained from the manufacturer's drawings provided by SBA. The structural loading information was obtained from SBA. The tower is located in Litchfield County, Connecticut. The tower analysis includes loads for existing and proposed appurtenances.

ANALYSIS CRITERIA

Specific code: TIA/EIA-222-F
Specific environmental conditions: 80 mph + 0" ice
69 mph + ½" ice

Table 1 – Proposed Antenna and Cable Information

Center Line Elevation	Carrier Name	No. of Antenna / Dish	Antenna Manufacturer	Antenna Model	Mount Type	Feed Lines (No.)	Feed Line Size (in.)
95	Cingular	9	CSS	DUO-1417-8686-40	13' Low Profile Platform	9	1-1/4"
95	Cingular	6	-	ADC Clear Gain Dual Band 800/1900 (TTA)	-	-	-
95	Cingular	3	CSS	Dual Band Combiner	-	-	-

Table 2 – Existing Antenna and Cable Information

Center Line Elevation	Carrier Name	No. of Antenna / Dish	Antenna Manufacturer	Antenna Model	Mount Type	Feed Lines (No.)	Feed Line Size (in.)
152	Sprint	6	Decibel	DB980H-M	13' Low Profile Platform	(6) / (1)	(1-5/8') / (1/2")
143	Nextel	9	Allgon	ALP 9212	13' Low Profile Platform	9	1-5/8"
133	T-Mobile	3	EMS Wireless	RR90-17-02DPL2	13' Low Profile Platform	6	1-5/8
123	Verizon	12	Decibel	DB844H90E-XY	13' Low Profile Platform	(12) / (1)	(1-5/8") / (1/2")
100	City of Torrington	1	Celwave	Omni	-	1	1/2"

Table 3 Future Antenna and Cable Information

Center Line Elevation	Carrier Name	No. of Antenna / Dish	Antenna Manufacturer	Antenna Model	Mount Type	Feed Lines (No.)	Feed Line Size (in.)
95	Cingular	3	CSS Antenna	DUO-1417-8686-40	13' Low Profile Platform	3	1-1/4"
133	T-Mobile	3	EMS Wireless	RR90-17-02DPL2	13' Low Profile Platform	6	1-5/8

ANALYSIS PROCEDURE

Analysis Methods

ERI Tower (Version 2.00), 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 or the 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 and 2 and the referenced drawings
4. When applicable, transmission cables are considered to be structural components for calculating wind loads, as allowed by TIA/EIA-222F.
5. Some assumptions are made regarding mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
6. The existing coax cables are assumed to be distributed equally on all the three faces of the tower if existing coax cables layout plan is not available to us.
7. Stress ratios for a structural member less than 100% indicates that it meets all design requirements set forth by TIA/EIA Standard. In addition, member stress ratios between 100% and 105% are acceptable

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

Southwestern Bell Mobile Systems, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7700
Fax: (860) 513-7190

Michele G. Briggs
Manager of Real Estate

February 13, 2004

Honorable Owen J. Quinn, Jr.
Mayor, City of Torrington
Municipal Bldg. 140 Main Street
Torrington, Connecticut 06790

Re: Notice of Exempt Modification – Existing SBA Telecommunications Tower Facility at 1925 - 1931 East Main Street, Torrington, Connecticut

Dear Mr. Johnson:

Southwestern Bell Mobile Systems, LLC ("SBMS") intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower at 1925 - 1931 East Main Street in Torrington, Connecticut.

The facility is owned and operated by SBA Properties, Inc. ("SBA"), 5900 Broken Sound Parkway NW, Boca Raton, FL 33487. SBA leases the land from TEP, Inc. of Torrington.

A Notice of Exempt Modification has been filed with the Connecticut Siting Council as required by Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73. Please accept this letter as notification to the City of Torrington under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The attached letter fully sets forth the SBMS proposal. However, if you have any questions or require any further information on the plans for the site or the Siting Council's procedures, please contact the undersigned or Mr. Derek Phelps, Executive Director of the Connecticut Siting Council, at (860) 827-2935.

Sincerely,

Michele G Briggs

Michele G. Briggs
Manager of Real Estate

Enclosure

NEW

Date 2/2/04

Mr. Tim Rosa
SBA Network Services
2490 Bruen Lane
Easton, PA 18040
O: (610) 252-1944

Sterling Engineering & Design Group, Ltd.
7171 Hwy 6 N, Ste 130, Houston, Texas 77095
(P) 281/583-7088 (F) 281/583-5495
Email: Dbrick@sedg.net

Subject: Structural Analysis Report – Our Project Number: 061-280

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Sterling Engineering and Design Group, Ltd.

Sandeep N. Patel, P.E.,S.E.

Attachments:
Elevation Drawing
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Deflection Diagram
Tower Details

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

ANALYSIS RESULTS

Tower Component Stresses vs. Capacity

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$SF*P_{allow}$ lb	% Capacity	Pass Fail
L1	165 - 150.5	Pole	TP24x24x0.2813	1	-1719.30	609642.19	2.3	Pass
L2	150.5 - 110.5	Pole	TP34.6875x23.4375x0.25	2	-9856.97	1366644.86	32.1	Pass
L3	110.5 - 65	Pole	TP44.6875x32.8794x0.3125	3	-19341.30	2215832.48	52.7	Pass
L4	65 - 21	Pole	TP54.5x42.6596x0.3125	4	-29206.50	2568544.26	71.3	Pass
L5	21 - 0	Pole	TP60x52.2173x0.375	5	-38175.50	3594900.90	60.9	Pass
							Summary	
						Pole (L4)	71.3	Pass
						RATING =	**71.3**	**Pass**

Foundation (Comparing design loads to actual loads)

Reaction	Foundation Capacity (kips)	Proposed Reactions from Analysis (kips)	Remarks
Shear	31.2	25.9	O.K.
Moment	3692	2642.7	O.K.

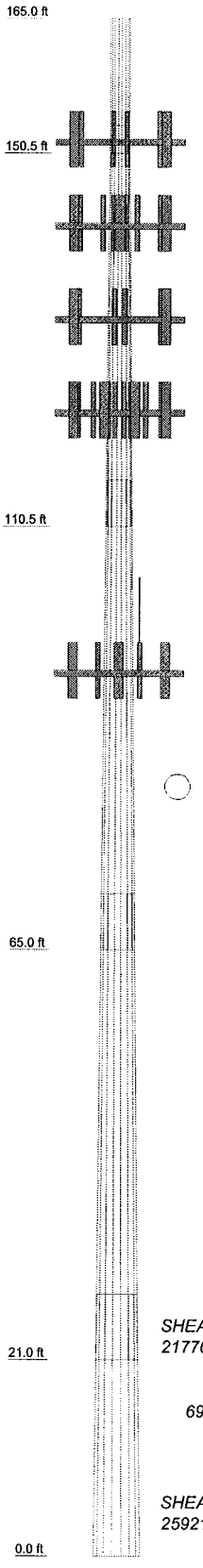
The tower reactions under current and proposed loading are less than the original foundation design reactions. Hence the foundation will be adequate to support the existing and proposed loading.

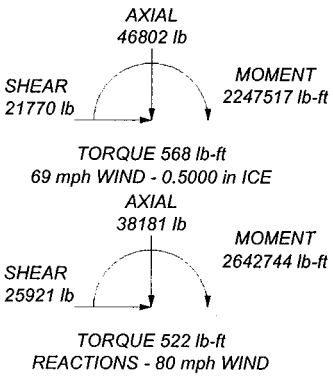
APPENDIX A

Elevation Drawings
Feedline Distribution Diagram
Deflection Diagram
Stress Distribution Diagram

Section	1	2	3	4	5
Length (ft)	14.50	43.00	50.50	50.00	28.00
Number of Sides	18	18	18	18	18
Thickness (in)	0.2813	0.2500	0.3125	0.3125	0.3750
Lap Splice (ft)	3.00	5.00	6.00	7.00	
Top Dia (in)	24.0000	23.4375	32.8794	42.6596	52.2173
Bot Dia (in)	24.0000	34.6875	44.6875	54.5000	60.0000
Grade	A36		A572-65		
Weight (lb)	1044.7	3345.3	6557.1	8145.4	6320.4

Total Weight: 25413.0





APPURTENANCES

TYPE	ELEVATION	TYPE	ELEVATION
(2) DB980H-M (Sprint- Exisitng)	152	PiROD 13' Low Profile Platform (Monopole)	123
(2) DB980H-M (Sprint- Existing)	152	Celwave (City of Torrington- Existing)	100
(2) DB980H-M (Sprint- Existing)	152	(3) DUO-1417-8686-40 (Cingular-PROPOSED)	95
PiROD 13' Low Profile Platform (Monopole)	152	(3) DUO-1417-8686-40 (Cingular-PROPOSED)	95
(3) ALP 9212 (Nextel - Existing)	143	(3) DUO-1417-8686-40 (Cingular-PROPOSED)	95
(3) ALP 9212 (Nextel - Existing)	143	PiROD 13' Low Profile Platform (Monopole)	95
(3) ALP 9212 (Nextel - Existing)	143	DUO-1417-8686-40 (Cingular - Future)	95
PiROD 13' Low Profile Platform (Monopole)	143	DUO-1417-8686-40 (Cingular - Future)	95
RR90-17-02DPL2 (T-Mobile- Existing)	133	DUO-1417-8686-40 (Cingular - Future)	95
RR90-17-02DPL2 (T-Mobile- Future)	133	(2) TTA's (Cingular - Proposed)	95
RR90-17-02DPL2 (T-Mobile- Future)	133	(2) TTA's (Cingular - Proposed)	95
RR90-17-02DPL2 (T-Mobile- Existing)	133	(2) TTA's (Cingular - Proposed)	95
RR90-17-02DP (T-Mobile- Existing)	133	Combiner (Cingular - Proposed)	95
RR90-17-02DP (T-Mobile-Future)	133	Combiner (Cingular - Proposed)	95
PiROD 13' Low Profile Platform (Monopole)	133	Combiner (Cingular - Proposed)	95
(4) DB844H90E-XY (Verizon- Existing)	123		
(4) DB844H90E-XY (Verizon- Existing)	123		
(4) DB844H90E-XY (Verizon- Existing)	123		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A36	36 ksi	58 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

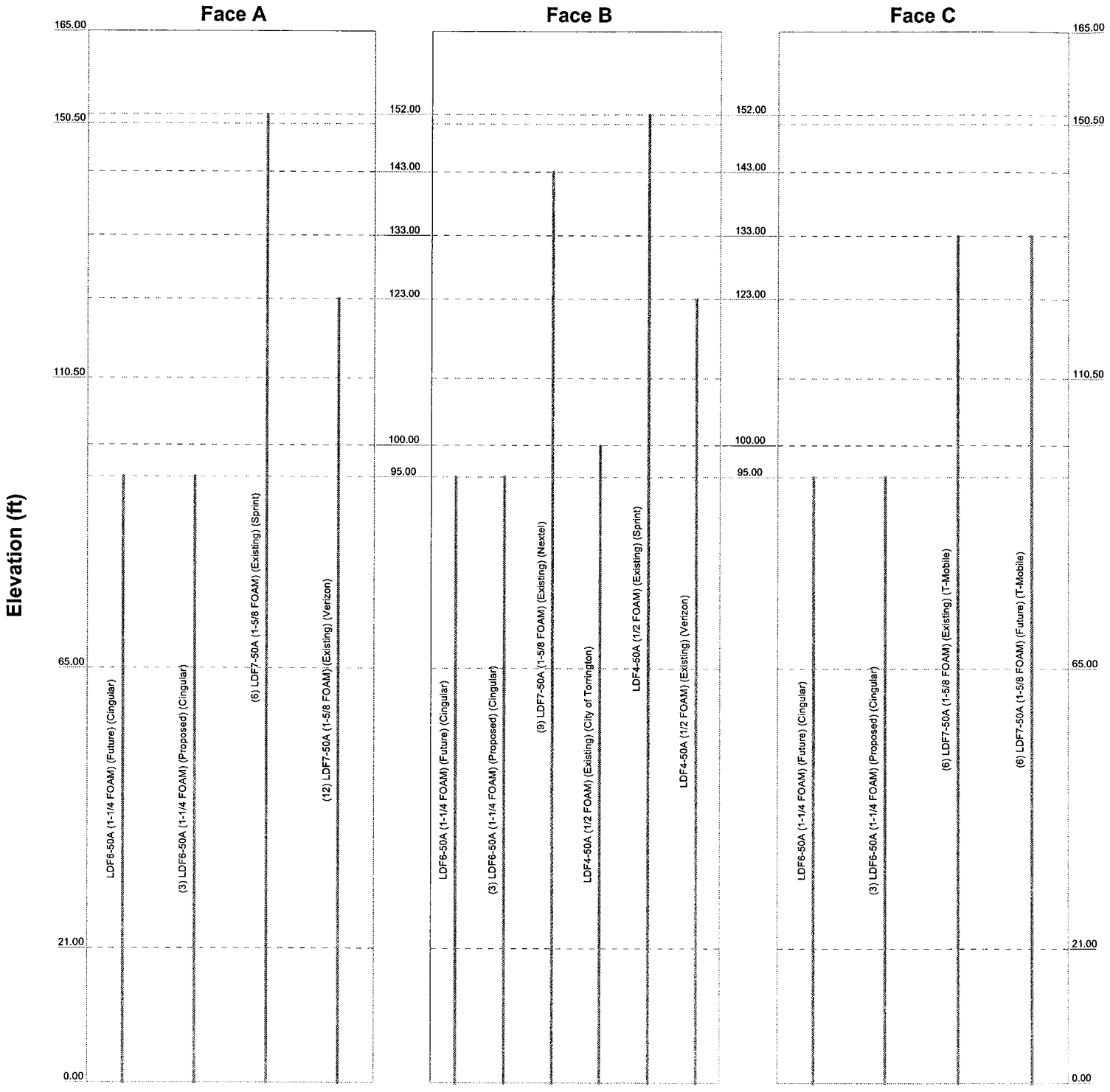
1. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 69 mph basic wind with 0.50 in ice.
3. Deflections are based upon a 50 mph wind.
4. TOWER RATING: 71.3%

Sterling Engineering
7171, Highway 6 North, Ste 130
Houston, TX 77095
Phone: (281) 583 7088
FAX: (281) 583 5495

Job:	***165 ' Monopole Tower***		
Project:	***Torrington, CT01499-S***		
Client: SBA Network Services, Inc.	Drawn by: ASM	App'd:	
Code: TIA/EIA-222-F	Date: 02/02/04	Scale: NTS	
Path: K:\$ SBA Network Services\061-280 Torrington CT01499-S\Engineering\Torrington.eri		Dwg No. E-1	

Feedline Distribution Chart
0' - 165'

Round ____ Flat ____ App In Face ..... App Out Face ..... Truss Leg



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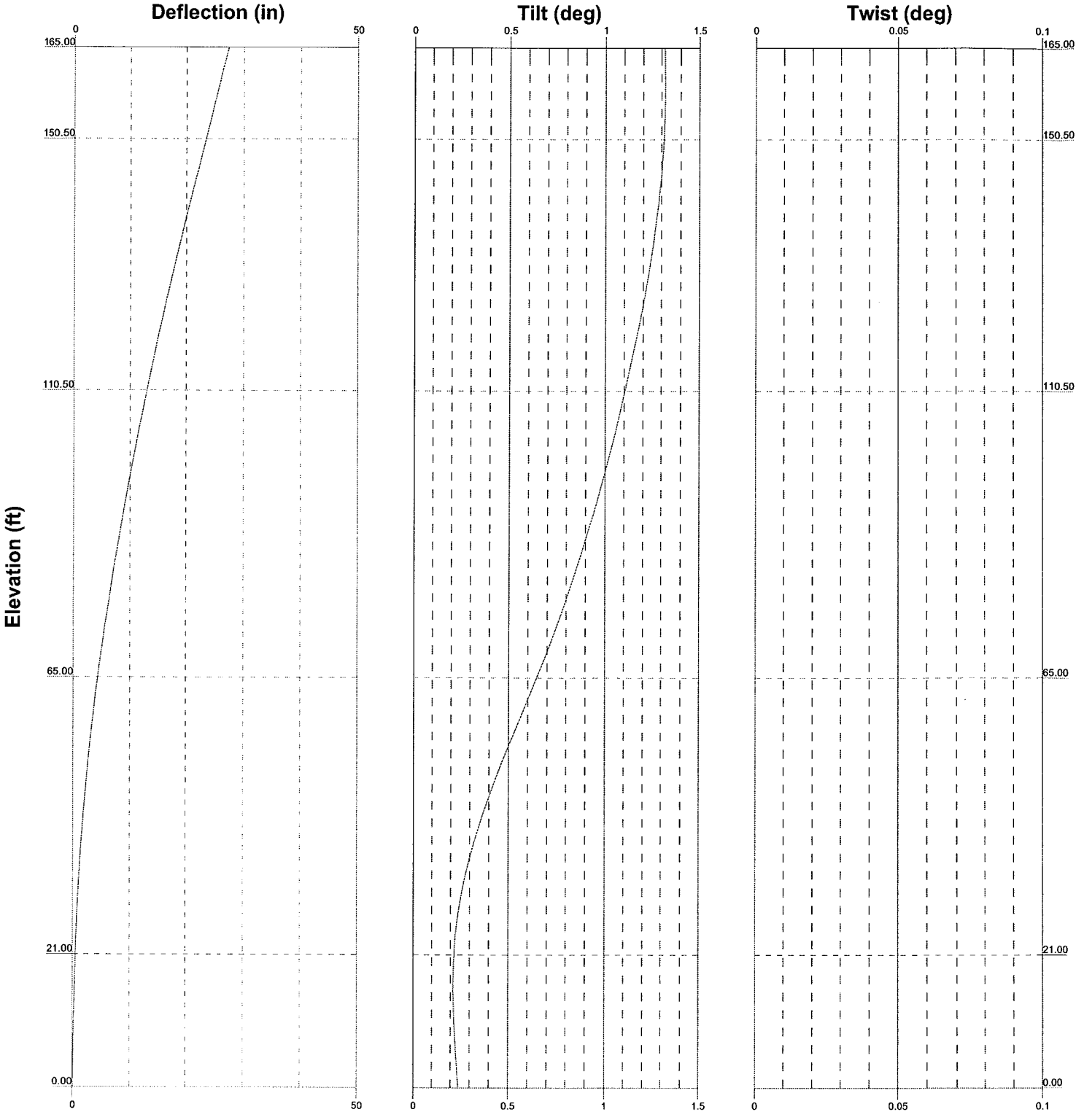
Code: TIA/EIA-222-F	Date: 02/02/04	Scale: NTS	
Path: K:\$ SBA Network Services\061-280 Torrington CT01499-S\Engineering\Torrington.ef		Dwg No. E-7	

TIA/EIA-222-F - Service - 50 mph

Maximum Values



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Job: *165 ' Monopole Tower*			
Project: *Torrington, CT01499-S*			
Client: SBA Network Services, Inc.	Drawn by: ASM	App'd:	
Code: TIA/EIA-222-F	Date: 02/02/04	Scale: NTS	
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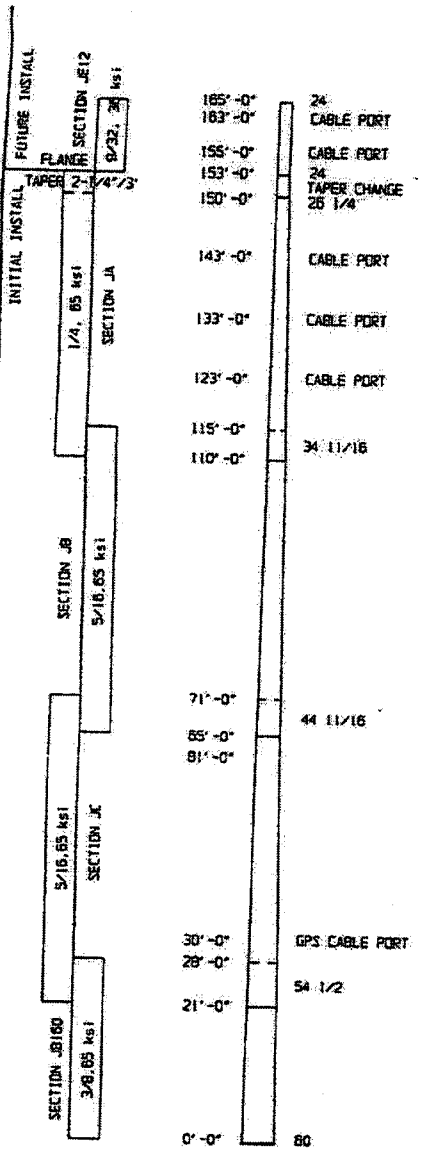
APPENDIX B

Tower Details



TOWER LOADING CONDITIONS

QTY	Antenna	Elevation
12	DB896	165'
1	14' Nudd Low-profile Platform	165'
12	DB896	155'
1	14' Nudd Low-profile Platform	155'
12	DB896	145'
1	14' Nudd Low-profile Platform	145'
12	DB896	135'
1	14' Nudd Low-profile Platform	135'
12	DB896	125'
1	14' Nudd Low-profile Platform	125'

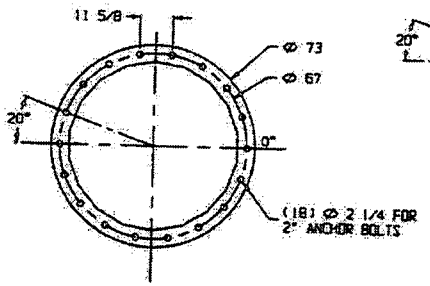
All transmission lines to be supported on the inside of pole thus adding no additional wind load.

NOTE: Any deviation from the proposed design antenna loading will require a tower analysis for verification of structural integrity.

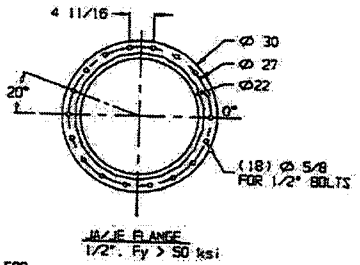
TOWER DESIGN CONDITIONS
This tower was designed to withstand 80 mph wind speed with 1/2" radial ice and the wind/ice reduction, per ANSI/EIA/TIA 222-F recommended standard.
Worst case load condition is wind without ice.
Allowable steel stresses per AISC ASD 9th Edition.
Allowable concrete stresses per ACI 318-95.

MATERIAL SPECIFICATIONS

Monopole Plate:	ASTM A572, Fy > 65 ksi.
Anchor Bolts:	ASTM A687, Fu > 125 ksi
Flange plate:	ASTM A36 Modified, Fy > 50 ksi
All other steel:	ASTM A36, Fy > 36 ksi
Hardware:	A325 Hot Dipped Galvanized Bolts with Anco Nuts
Galvanizing:	ASTM A123



JB150 BASE FLANGE
1 1/2", Fy > 50 ksi



JA/JE FLANGE
1/2", Fy > 50 ksi

ANTENNA (TOP) PORTS
ORIENTATION: 0°,120°,240°

CABLE ENTRY PORT LOCATIONS

HEIGHT	AZIMUTH	SIZE
6'	0°, 180°	12x18
8'	90°, 270°	12x18
10'	0°, 180°	12x18
2'	180°	18x29

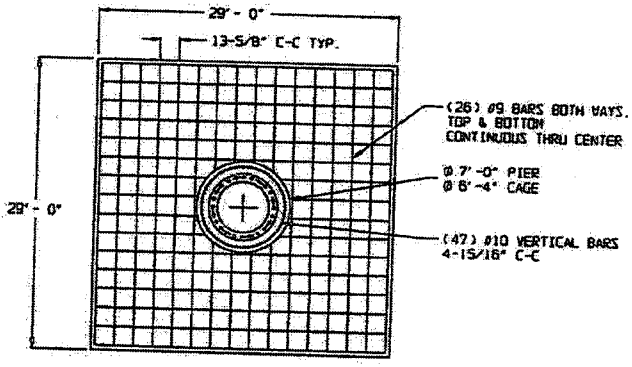
CLIMBING FACE: 130°

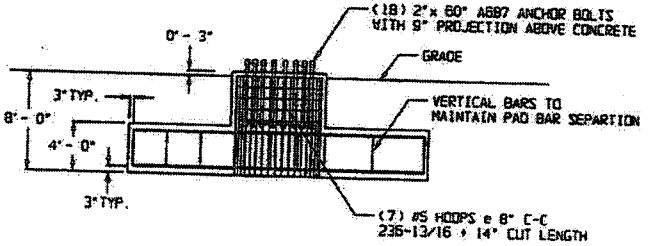
CONCRETE SPECIFICATIONS
1. Concrete shall have a minimum compressive strength of at least 3000 psi at 28 days. It is our recommendation that 4000 psi concrete be installed to account for any unknown installation variables that could degrade the concrete.
2. Concrete installation shall meet ACI 318-95 installation requirements for reinforced concrete.
3. All concrete shall be placed against undisturbed soil free of water and all foreign objects and materials.
4. Minimum concrete cover shall be 3" over all reinforcing bars.
5. Reinforcing bars shall be ASTM A-615 Grade 60 deformed bars.
6. Assemble bars with tie wires or weld. Welded bars must conform to ANSI/AWS D1.1-94 specifications.
7. Chamfer all sharp corners of exposed concrete.

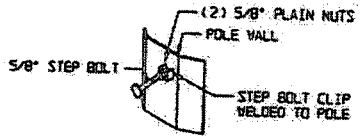
SOIL SPECIFICATIONS
1. Per soils report by Javorski Geotech, Inc. dated 11/03/99 (JGI Project No.993356), soil is medium dense, grey/brown, fine sand with some silt and occasional cobbles and boulders. No groundwater was encountered.
2. All foundations shall be free of free standing water as far as possible prior to pouring concrete and shall be kept thus until backfill is in place. If not possible, special pouring procedures must be followed.
3. Rock, non-cohesive, saturated or submerged soils are not to be considered as normal soil. See EIA 7.2.2.
4. Backfill shall be compacted to 100 pcf in 6" lifts using excavated material.
5. Backfill shall be placed so as to prevent accumulation of water around foundations or anchors.

TOWER REACTIONS:
Overturning Moment: 3892 kip-ft
Shear: 31.2 kip

CONCRETE VOLUME: 131+ cuyd
STEEL WEIGHT: 13702+ lbs







STEP BOLT INSTALLATION

INSTALLATION GENERAL NOTES
1. Installation of tower must be performed by a qualified tower erector.
2. Install sections such that climbing device is aligned.
3. Install safety climb per manufacturer's recommendations.
4. Slip-joint jacking force: Minimum 8000 lb.
5. Tighten all structural and anchor bolts per AISC specifications.
6. Sections are numbered at the bottom, near the climbing face.
7. Installer must grind outside/top and inside/bottom of each section and at the weld locations of the squaring bracing to facilitate slip joint fit. Cover grind area with spray galvanizing.

Pole section weights, lb:

Section JE12:	1150 +/-
Section JA:	3750 +/-
Section JB:	6800 +/-
Section JC:	10600 +/-
Section JB160:	7500 +/-

FRED A. NUDD CORPORATION
Route 104-Ontario, New York 14519-315/524-2531

SCALE: N/S	DRAWN BY: RDP	APPROVED BY:
DATE: 8/18/00		

153'/165' MJ-160 MONOPOLE DESIGN

SBA #4275-010 / TORRINGTON
TORRINGTON, LITCHFIELD COUNTY, CT

DRAWING NUMBER: 00-7783-1