



# 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](mailto:siting.council@po.state.ct.us)

Web Site: [www.state.ct.us/csc/index.htm](http://www.state.ct.us/csc/index.htm)

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-115-040210** - Southwestern Bell Mobile Systems, LLC notice of intent to modify an existing telecommunications facility located at 229 Cheshire Road, Prospect, Connecticut.

Dear Ms. Briggs:

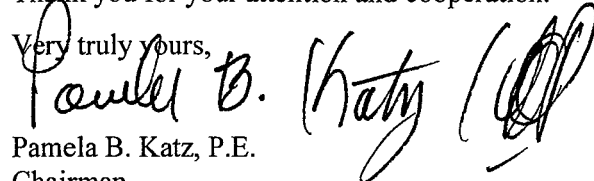
At a public meeting held on February 18, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated February 9, 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 Robert J. Chatfield, Mayor, Town of Prospect
- William J. Donovan, Zoning Enforcement Officer, Town of Prospect
- Bryan Wilson, SBA, Inc.
- Christopher B. Fisher, Esq., Cuddy & Feder LLP
- Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
- Sandy M. Carter, Verizon Wireless



**Michele G. Briggs**  
*Manager of Real Estate*

February 9, 2004

**RECEIVED**  
FEB 10 2004

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

CONNECTICUT  
SITING COUNCIL

**Re: Notice of Exempt Modification – Existing SBA Telecommunications Tower  
Facility at 229 Cheshire Road, Prospect, 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 Cheshire Road in Prospect, Connecticut.

The Prospect facility is located at 229 Cheshire Road, which is off CT Hwy 68, approximately midway between its intersections with CT Hwy 69 and CT Hwy 70. Tower coordinates (NAD 83) are N 41° 30' 28.4" and W 72° 57' 03.7". 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 Boardman Kathan.

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 Prospect.

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 New Haven, CT Metropolitan 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 October 29, 1999, which was prior to the November 2000 Covello decision concerning Council and Town jurisdiction for tower siting. The tower came under Council jurisdiction with Verizon's application to co-locate in TS-VER-115-012307, which was approved on January 3, 2002.

The Cheshire Road facility consists of a 150-foot monopole within a roughly 60' x 70' corner-truncated square compound surrounded by a 6-ft high chain link fence topped by barbed wire. Sprint, Verizon (approved, but not yet installed), and AT&T 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 117 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." A small GPS antenna will be mounted on the tower at approximately 50 feet AGL. 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 Prospect 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 <sup>†</sup> (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
Sprint *	147	1930	11	265	0.0485	1.0000	4.85
Verizon *	137	875	19	100	0.0364	0.5833	6.24
AT&T *	127	D: 1945 E: 1985	16	250	0.0892	1.0000	8.92
Cingular	117	880 - 894	2	296	0.0155	0.5867	2.65
Cingular	117	1930 - 1935	2	427	0.0224	1.0000	2.24
<b>Total</b>							<b>24.90%</b>

\* Power density parameters taken from applications to the Council: TS-VER-115-0112007 and EM-SBA-115-020418.

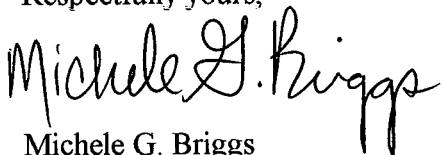
† Please note that the standard power density equation provided by the Council in its memo of January 22, 2001 incorporates a ground reflection factor of 2.56 (i.e., the square of 1.6) as described in FCC OET Bulletin No. 65.

As the table demonstrates, the cumulative "worst-case" exposure would be approximately 25% of the ANSI/IEEE standard, as calculated for mixed frequency sites. 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 Prospect 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,

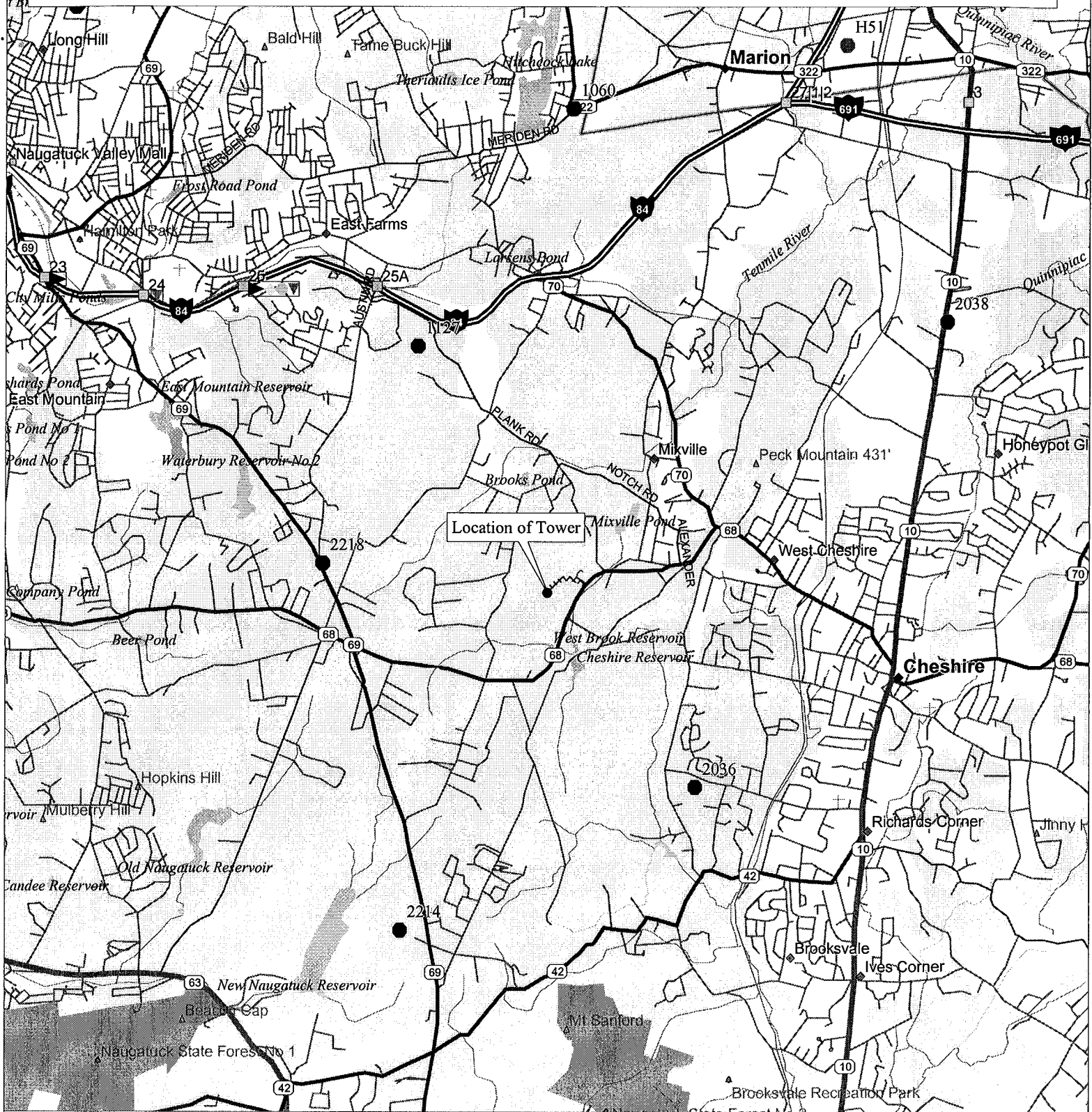


Michele G. Briggs  
Manager of Real Estate

Enclosures

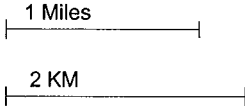
cc: Honorable Robert Chatfield, Mayor, Town of Prospect

# Prospect - SBA Tower



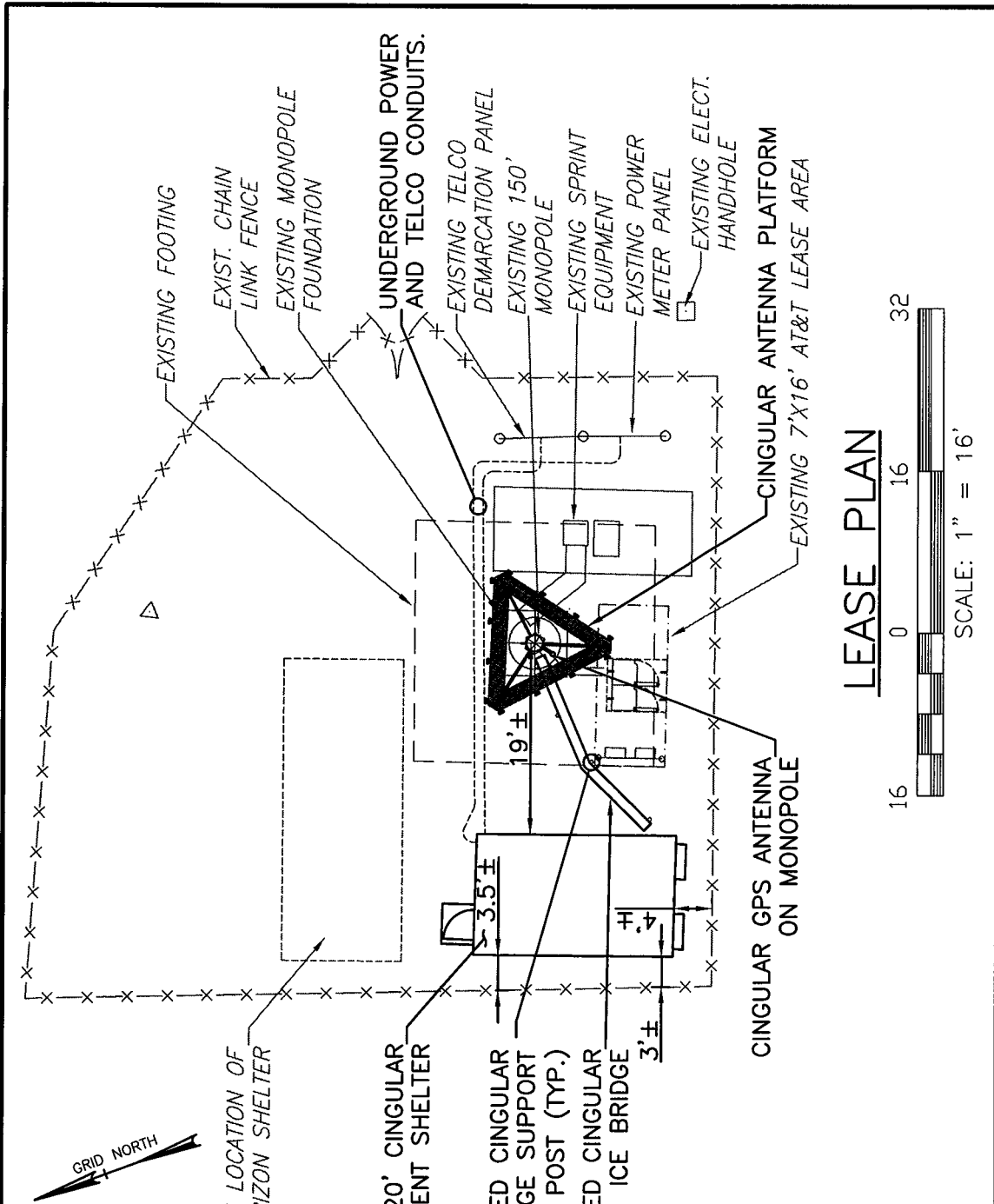
Mag 13.00  
Mon Feb 09 11:26 2004

Scale 1:62,500 (at center)

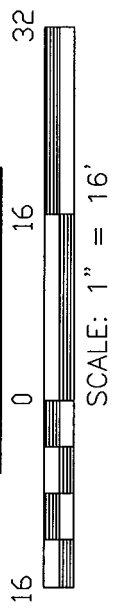


- Local Road
- Major Connector
- State Route
- Primary State Route
- Trail





**LEASE PLAN**

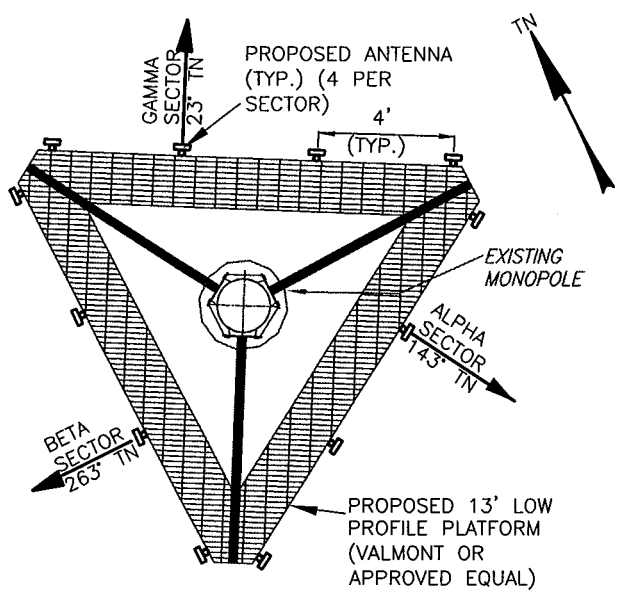


**NOTE 1:**  
 DRAWING IS SCHEMATIC.  
 FINAL EQUIPMENT LOCATIONS,  
 ANTENNA TYPES, AND ANTENNA  
 AZIMUTHS WILL BE FINALIZED  
 UPON COMPLETION OF DESIGN.

**NOTE 2:**  
 THIS DOCUMENT WAS DEVELOPED TO  
 REFLECT A SPECIFIC SITE AND ITS SITE  
 CONDITIONS AND IS NOT TO BE USED  
 FOR ANOTHER SITE OR WHEN OTHER  
 CONDITIONS PERTAIN. REUSE OF THIS  
 DOCUMENT IS AT THE SOLE RISK OF THE  
 USER.

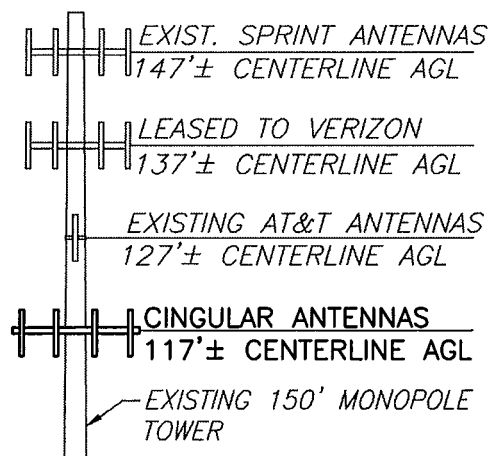
**STRUCTURAL NOTE:**  
 NEW CONSTRUCTION REPRESENTED ON  
 THESE PLANS IS PROPOSED PREDICATED  
 ON THE REQUIREMENT THAT A  
 STRUCTURAL ANALYSIS BE PERFORMED BY  
 A LICENSED CONNECTICUT PROFESSIONAL  
 STRUCTURAL ENGINEER AND CERTIFICATION  
 IS GIVEN BY THE ENGINEER THAT THE  
 EXISTING TOWER AND ALL EXISTING AND  
 PROPOSED ANTENNAS AND  
 APPURTENANCES SUPPORTED BY THE  
 TOWER AND ANY REQUIRED IMPROVEMENTS  
 AND REINFORCEMENTS HAVE SUFFICIENT  
 STRUCTURAL CAPACITY AND COMPLY WITH  
 THE CONNECTICUT BUILDING CODE AND  
 ALL APPLICABLE EIA/TIA CRITERIA. NO  
 WORK PROPOSED HEREON SHALL BE  
 PROGRESSED WITHOUT CONFIRMATION OF  
 THIS CERTIFICATION.

<p><b>Dewberry-Goodkind, Inc.</b>                  A Dewberry Company                  59 Elm Street, Suite 101                  New Haven, CT 06510                  P. (203) 776-2277                  F. (203) 776-2288</p>		<p>SCALE: AS SHOWN</p>		<p>DESIGNED BY: CKD</p>	
<p>DATE: 02/04/04</p>		<p>SITE NAME: PROSPECT                  229 CHESHIRE ROAD                  PROSPECT, CONNECTICUT</p>		<p>SHEET NO. LE1</p>	
<p>LEASING PLAN</p>		<p>WIRELESS</p>			

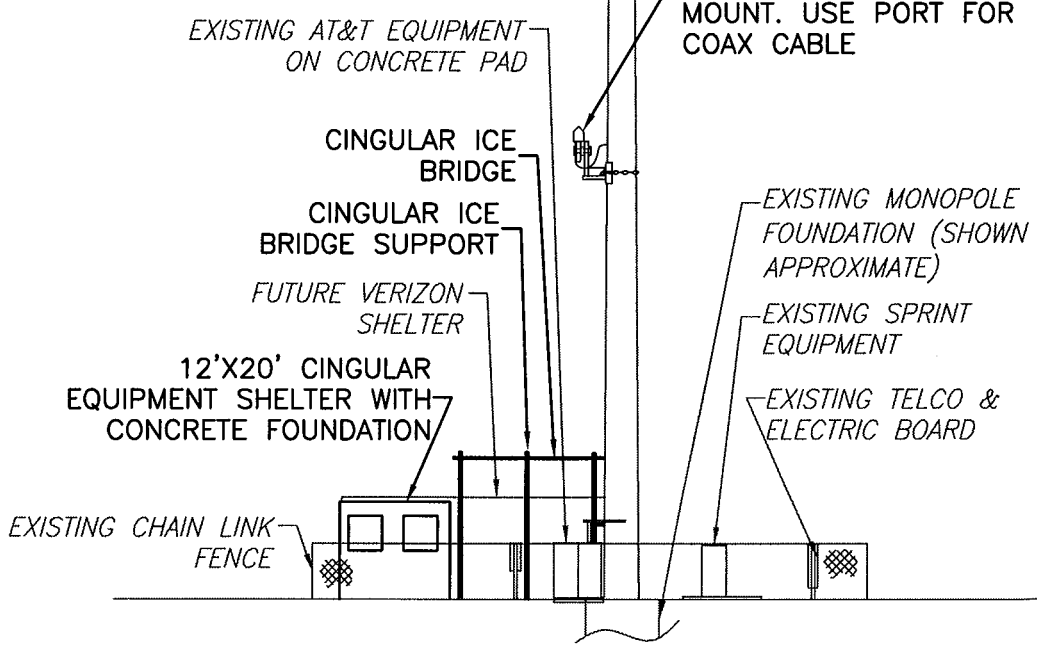


NOTE:  
ANTENNA AZIMUTHS AND MOUNTING DETAILS  
SHALL BE FINALIZED UPON COMPLETION OF  
SITE DESIGN.

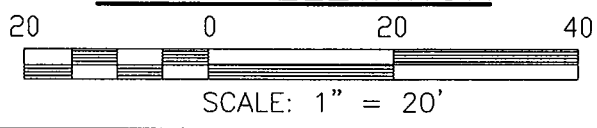
**TOP VIEW**  
SCALE: N.T.S.



PROPOSED GPS ANTENNA  
50'± AGL WITH CHAIN  
MOUNT. USE PORT FOR  
COAX CABLE



**SOUTH ELEVATION**



Q:\3666\07-Prospect\cadd\cell\lease\L2\_cingular.dwg Plot: msmith Thu, Feb 05 2004 - 8:13:15am Xref: Layer State: By: MJS

<b>Dewberry-Goodkind, Inc.</b> A Dewberry Company 59 Elm Street, Suite 101 New Haven, CT 06510 p. (203) 776-2277 f. (203) 776-2288  Engineers Planners Surveyors	SCALE: <b>AS SHOWN</b>	<b>LEASING ELEVATION</b>	
	DESIGNED BY: <b>CKD</b>		
	DATE: <b>02/04/04</b>		



## Structural Analysis Report

**Client** : SBA Network Services, Inc.  
**Site Name** : E-Prospect  
**Site I.D.** : CT02694-B  
**Address** : New Haven County, CT  
**Tower I.D.** : 150' Monopole Tower  
  
**Proposed Tenant** : Cingular Wireless  
**Proposed Equipment** : (9) DUO-1417-8686-40 @ 117' AGL  
(9) 1 1/4" Coax  
(6) ADC Clear Gain Dual Band 800/1900  
(3) CSS Dual Band Combiner  
  
**Future Equipment** : (3) DUO-1417-8686-40 @ 117' AGL  
(3) 1 1/4" Coax  
  
**Analysis Result** : Tower Structure Meets  
TIA/EIA-222-F Standard Requirements



11/20/03

November 20, 2003  
PREPARED BY:  
STERLING ENGINEERING AND DESIGN GROUP, LTD  
7171 HWY6, Suite 130, HOUSTON, TEXAS  
(281) 583 7088 (P) ♦ (281) 583 5495 (F)





**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 9, 2004

Honorable Robert Chatfield  
Mayor, Town of Prospect  
Town Office Building 36 Center Street  
Prospect, Connecticut 06712

**Re: Notice of Exempt Modification – Existing SBA Telecommunications Tower Facility at 229 Cheshire Road, Prospect, 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 229 Cheshire Road in Prospect, 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 Boardman Kathan.

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 Town of Prospect 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  
Manager of Real Estate

Enclosure



**RECEIVED**  
FEB 10 2004

Structural Analysis Report **CONNECTICUT  
SITING COUNCIL**

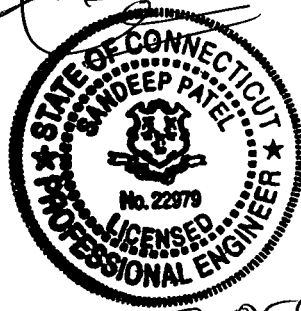
**Client** : SBA Network Services, Inc.

**Site Name** : E-Prospect  
**Site I.D.** : CT02694-B  
**Address** : New Haven County, CT  
**Tower I.D.** : 150' Monopole Tower

**Proposed Tenant** : Cingular Wireless  
**Proposed Equipment** : (9) DUO-1417-8686-40 @ 117' AGL  
 (9) 1 1/4" Coax  
 (6) ADC Clear Gain Dual Band 800/1900  
 (3) CSS Dual Band Combiner

**Future Equipment** : (3) DUO-1417-8686-40 @ 117' AGL  
 (3) 1 1/4" Coax

**Analysis Result** : Tower Structure Meets  
 TIA/EIA-222-F Standard Requirements

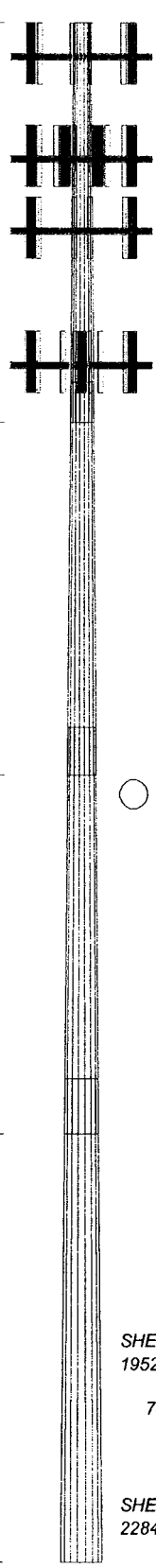


November 20, 2003

PREPARED BY:

STERLING ENGINEERING AND DESIGN GROUP, LTD  
 7171 HWY6, Suite 130, HOUSTON, TEXAS  
 (281) 583 7088 (P) ♦ (281) 583 5495 (F)

Section	Length (ft)	Number of Sides	Thickness (in)	Lap Splice (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	38.82	18	0.1875	3.89	19.5000	27.1160	A572-65	1817.6
2	38.27	18	0.2500	4.67	25.9778	33.3629	A572-65	3040.1
3	39.63	18	0.3125	5.43	31.9619	39.4834	A572-65	4795.7
4	47.28	18	0.3750		37.9269	47.0000	A572-65	8049.7



**APPURTENANCES**

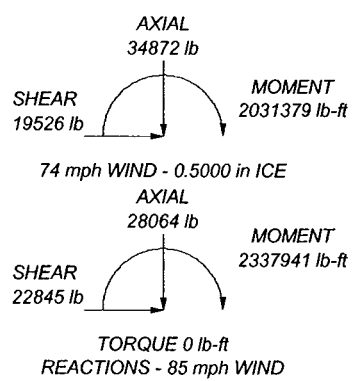
TYPE	ELEVATION	TYPE	ELEVATION
(2) DB980H0E-M (Sprint- Existing)	147	(3) DUO-1417-8686-40 (Cingular-PROPOSED)	117
(2) DB980H0E-M (Sprint- Existing)	147	(3) DUO-1417-8686-40 (Cingular-PROPOSED)	117
(2) DB980H0E-M (Sprint- Existing)	147	(3) DUO-1417-8686-40 (Cingular-PROPOSED)	117
PIROD 13' Low Profile Platform (Monopole)	147	PIROD 13' Low Profile Platform (Monopole)	117
(4) DB844H90E-XY (Verizon- Existing)	137	DUO-1417-8686-40 (Cingular - Future)	117
(4) DB844H90E-XY (Verizon- Existing)	137	DUO-1417-8686-40 (Cingular - Future)	117
(4) DB844H90E-XY (Verizon- Existing)	137	DUO-1417-8686-40 (Cingular - Future)	117
PIROD 13' Low Profile Platform (Monopole)	137	(2) TTA'S (Cingular - Proposed)	117
(2) 7250.01 (ATI- Existing)	130	(2) TTA'S (Cingular - Proposed)	117
(2) 7250.01 (ATI- Existing)	130	(2) TTA'S (Cingular - Proposed)	117
(2) 7250.01 (ATI- Existing)	130	Combiner (Cingular - Proposed)	117
PIROD 13' Low Profile Platform (Monopole)	130	Combiner (Cingular - Proposed)	117
(3) DUO-1417-8686-40 (Cingular-PROPOSED)	117	Combiner (Cingular - Proposed)	117

**MATERIAL STRENGTH**

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

**TOWER DESIGN NOTES**

1. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
3. Deflections are based upon a 50 mph wind.
4. TOWER RATING: 87.8%

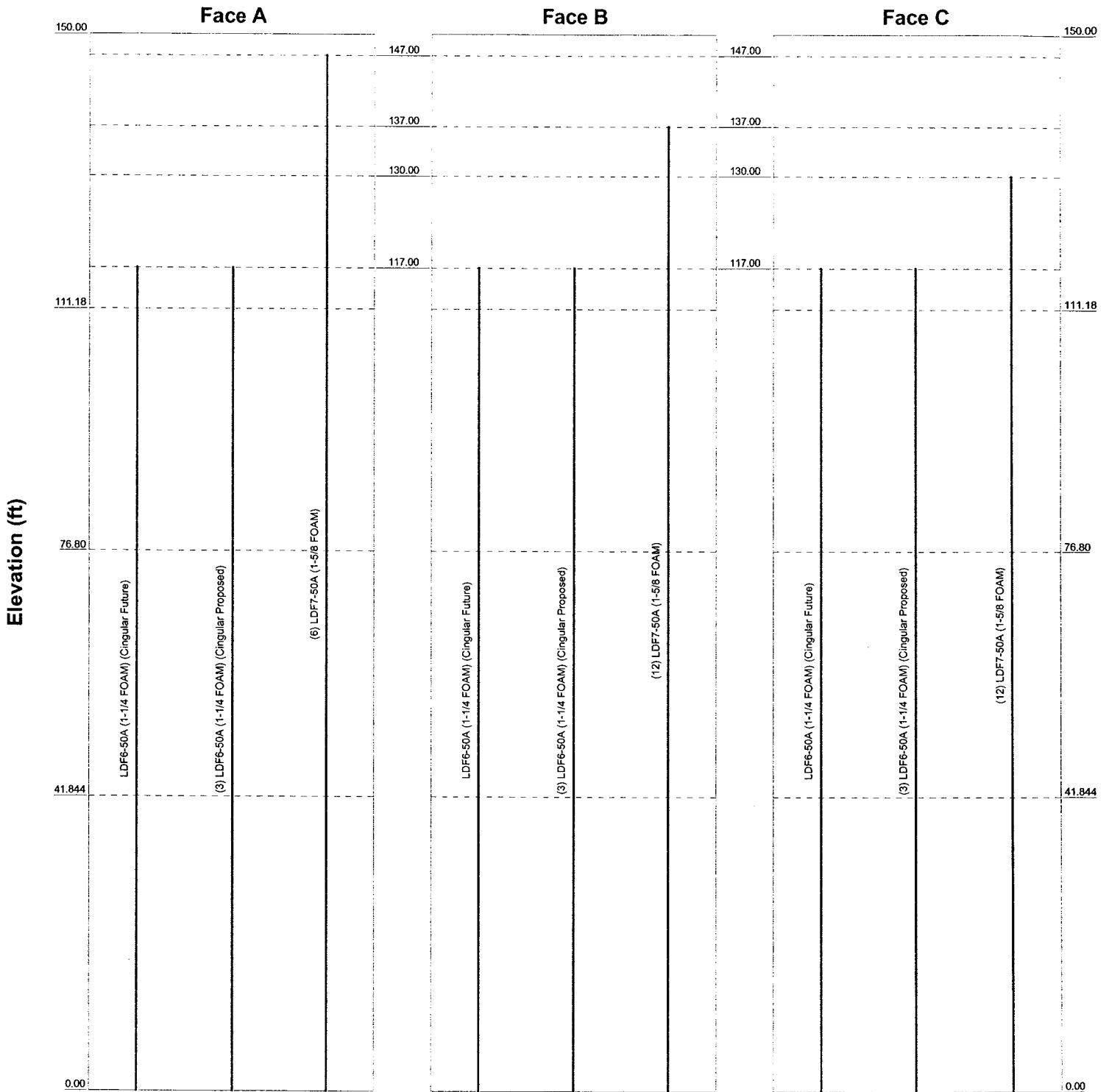


<b>Sterling Engineering</b>			
7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495			
Job: <b>150-Ft Monopole Tower</b>		Project: <b>E-Prospect, CT02694-B</b>	
Client: <b>SBA Network Services, Inc.</b>	Drawn by: <b>KK</b>	App'd:	
Code: <b>TIA/EIA-222-F</b>	Date: <b>11/20/03</b>	Scale: <b>NTS</b>	
Path: <small>K:\SBA Network Services\061-298 E Prospect CT02694-B\Engineering\E-Prospect.ed</small>		Dwg No: <b>E-1</b>	

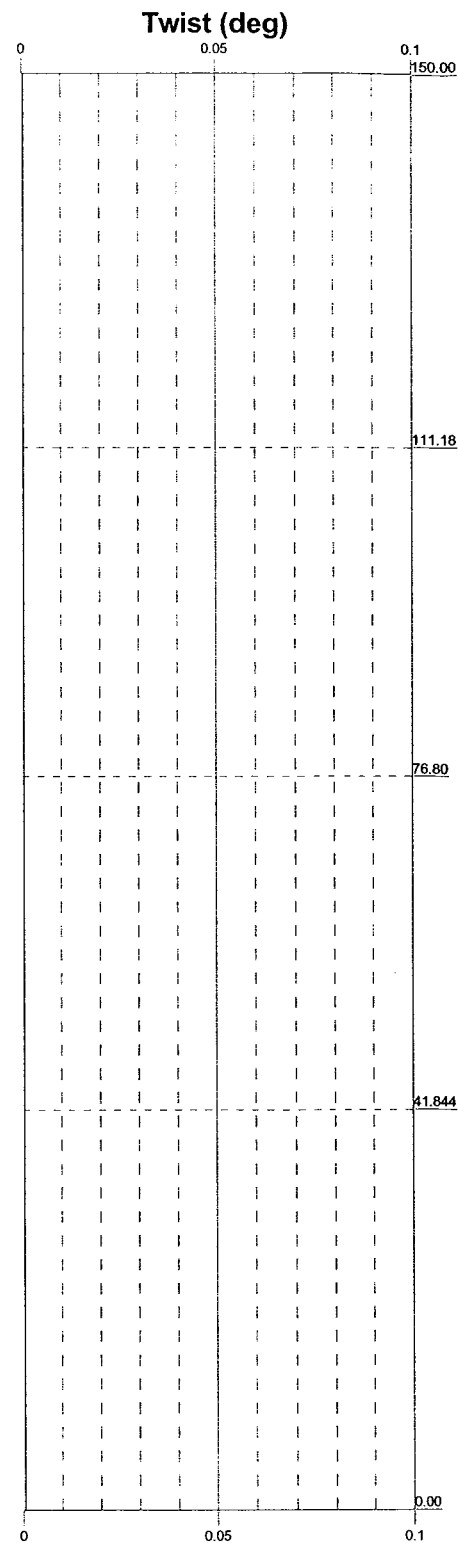
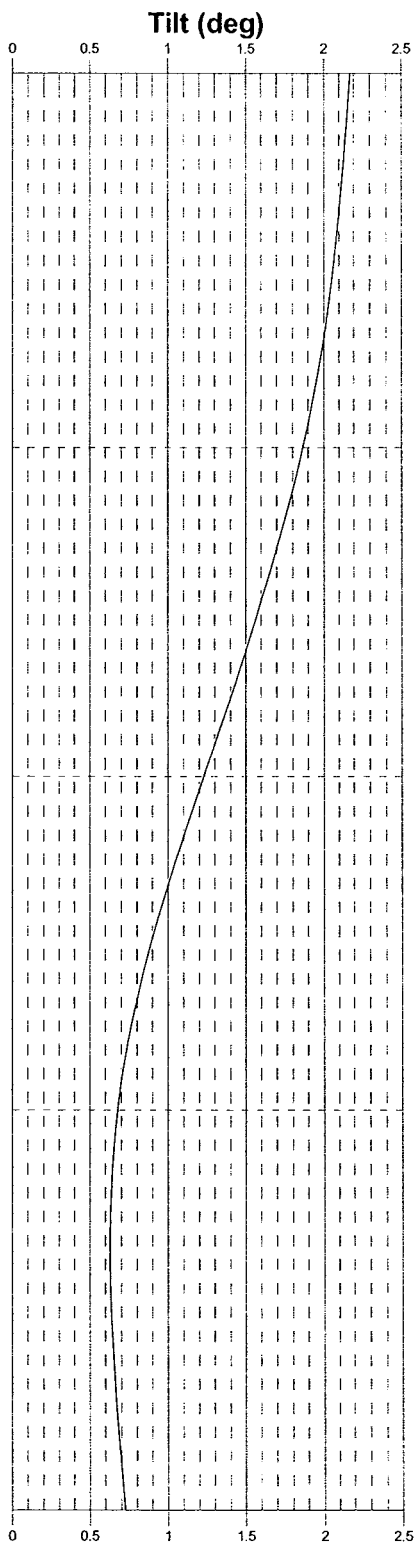
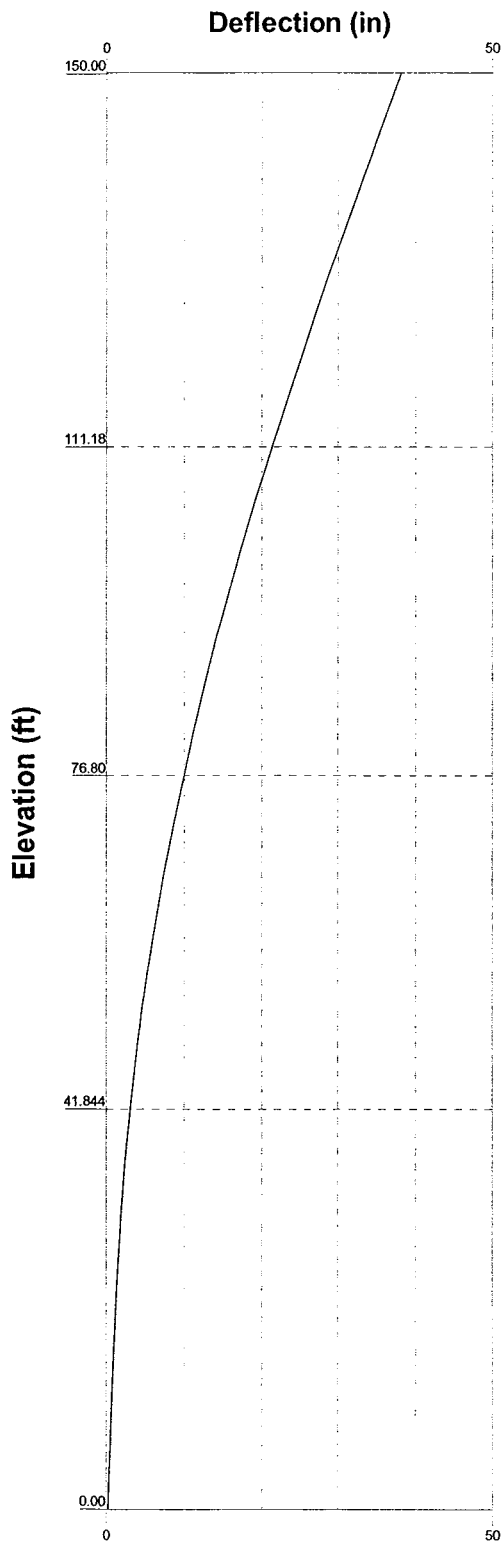
# Feedline Distribution Chart

## 0' - 150'

\_\_\_\_\_ Round \_\_\_\_\_ Flat \_\_\_\_\_ App In Face \_\_\_\_\_ App Out Face \_\_\_\_\_ Truss Leg



<b>Sterling Engineering</b>			
7171, Highway 6 North, Ste 130			
Houston, TX 77095			
Phone: (281) 583 7088			
FAX: (281) 583 5495			
Job: <b>150-Ft Monopole Tower</b>		Project: <b>E-Prospect, CT02694-B</b>	
Client: SBA Network Services, Inc.	Drawn by: KK	App'd:	
Code: TIA/EIA-222-F	Date: 11/20/03	Scale: NTS	
Path: K:\SBA Network Services\051786 E Prospect CT02694-B\Engineering\E-Prospect.ed			Dwg No. <b>E-7</b>



<p><b>Sterling Engineering</b>                  7171, Highway 6 North, Ste 130                  Houston, TX 77095                  Phone: (281) 583 7088                  FAX: (281) 583 5495</p>				<p>Job: <b>150-Ft Monopole Tower</b></p>	
				<p>Project: <b>E-Prospect, CT02694-B</b></p>	
<p>Client: SBA Network Services, Inc.</p>		<p>Drawn by: KK</p>	<p>App'd:</p>		
<p>Code: TIA/EIA-222-F</p>		<p>Date: 11/20/03</p>	<p>Scale: NTS</p>		
<p>Path: K:\SBA Network Services\061-286 E Prospect CT02694-B\Engineering\E-Prospect.rvt</p>		<p>Dwg No. <b>E-5</b></p>			

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b> 150-Ft Monopole Tower	<b>Page</b> 1 of 17
	<b>Project</b> E- Prospect, CT02694-B	<b>Date</b> 12:37:06 11/20/03
	<b>Client</b> SBA Network Services, Inc.	<b>Designed by</b> KK

## Tower Input Data

There is a pole section.

This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

Basic wind speed of 85 mph.

Nominal ice thickness of 0.5000 in.

Ice density of 56 pcf.

A wind speed of 74 mph is used in combination with ice.

Temperature drop of 50 F.

Deflections calculated using a wind speed of 50 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.333.

Local bending stresses due to climbing loads and feedline supports are not considered.

## Options

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>Consider Moments - Legs</li> <li>Consider Moments - Horizontals</li> <li>Consider Moments - Diagonals</li> <li>Use Moment Magnification</li> <li>√ Use Code Stress Ratios</li> <li>Use Code Safety Factors - Guys</li> <li>Escalate Ice</li> <li>Always Use Max Kz</li> <li>Use Special Wind Profile</li> <li>√ Include Bolts In Member Capacity</li> <li>Leg Bolts Are At Top Of Section</li> <li>√ Secondary Horizontal Braces Leg</li> </ul> | <ul style="list-style-type: none"> <li>Distribute Leg Loads As Uniform</li> <li>Assume Legs Pinned</li> <li>Assume Rigid Index Plate</li> <li>√ Use Clear Spans For Wind Area</li> <li>Use Clear Spans For KL/r</li> <li>Retention Guys To Initial Tension</li> <li>√ Bypass Mast Stability Checks</li> <li>√ Use Azimuth Dish Coefficients</li> <li>√ Project Wind Area of Appurt.</li> <li>Autocalc Torque Arm Areas</li> <li>SR Members Have Cut Ends</li> </ul> | <ul style="list-style-type: none"> <li>Treat Feedline Bundles As Cylinder</li> <li>Use ASCE 10 X-Brace Ly Rules</li> <li>Calculate Redundant Bracing Forces</li> <li>Consider Feedline Torque</li> <li>√ SR Leg Bolts Resist Compression</li> <li>All Leg Panels Have Same Allowable</li> <li>Offset Girt At Foundation</li> <li style="padding-left: 40px;">Poles</li> <li>√ Include Shear-Torsion Interaction</li> <li>Always Use Sub-Critical Flow</li> <li>Use Top Mounted Sockets</li> </ul> |
|--|---|---|

## Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	150.00-111.18	38.82	3.89	18	19.5000	27.1160	0.1875	0.7500	A572-65 (65 ksi)
L2	111.18-76.80	38.27	4.67	18	25.9778	33.3629	0.2500	1.0000	A572-65 (65 ksi)
L3	76.80-41.84	39.63	5.43	18	31.9619	39.4834	0.3125	1.2500	A572-65 (65 ksi)
L4	41.84-0.00	47.28		18	37.8269	47.0000	0.3750	1.5000	A572-65 (65 ksi)

## Tapered Pole Properties

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b> 150-Ft Monopole Tower	<b>Page</b> 2 of 17
	<b>Project</b> E- Prospect, CT02694-B	<b>Date</b> 12:37:06 11/20/03
	<b>Client</b> SBA Network Services, Inc.	<b>Designed by</b> KK

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>2</sup>	J in <sup>4</sup>	It/Q in <sup>2</sup>	w in	w/t
L1	19.8008	11.4934	541.5782	6.8559	9.9060	54.6717	1083.8689	5.7478	3.1020	16.544
	27.5343	16.0258	1468.1896	9.5596	13.7749	106.5842	2938.3110	8.0144	4.4424	23.693
L2	27.1408	20.4150	1707.2374	9.1334	13.1967	129.3681	3416.7211	10.2095	4.1321	16.528
	33.8776	26.2751	3639.7875	11.7551	16.9484	214.7576	7284.3644	13.1400	5.4319	21.727
L3	33.3549	31.3923	3972.7501	11.2355	16.2367	244.6779	7950.7277	15.6991	5.0753	16.241
	40.0925	38.8526	7531.5618	13.9057	20.0576	375.4973	15073.0338	19.4300	6.3991	20.477
L4	39.4811	44.5772	7899.4792	13.2954	19.2161	411.0868	15809.3527	22.2928	5.9975	15.993
	47.7251	55.4954	15241.6567	16.5519	23.8760	638.3673	30503.3687	27.7530	7.6120	20.299

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A <sub>f</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontal
ft	ft <sup>2</sup>	in					in	in
L1 150.00- 111.18				1	1	1		
L2 111.18- 76.80				1	1	1		
L3 76.80-41.84				1	1	1		
L4 41.84-0.00				1	1	1		

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face	Allow Shield	Component Type	Placement	Total Number	C <sub>AA</sub>	Weight	
				ft		ft <sup>2</sup> /ft	plf	
LDF6-50A (1-1/4 FOAM) (Cingular Future)	A	No	CaAa (Out Of Face)	117.00 - 0.00	1	No Ice	0.16	0.66
						1/2" Ice	0.25	1.91
						1" Ice	0.35	3.78
						2" Ice	0.55	9.33
						4" Ice	0.95	27.78
LDF6-50A (1-1/4 FOAM) (Cingular Proposed)	A	No	Inside Pole	117.00 - 0.00	3	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
						2" Ice	0.00	0.66
						4" Ice	0.00	0.66
LDF6-50A (1-1/4 FOAM) (Cingular Future)	B	No	CaAa (Out Of Face)	117.00 - 0.00	1	No Ice	0.16	0.66
						1/2" Ice	0.25	1.91
						1" Ice	0.35	3.78
						2" Ice	0.55	9.33
						4" Ice	0.95	27.78
LDF6-50A (1-1/4 FOAM) (Cingular Proposed)	B	No	Inside Pole	117.00 - 0.00	3	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
						2" Ice	0.00	0.66
						4" Ice	0.00	0.66
LDF6-50A (1-1/4 FOAM) (Cingular Future)	C	No	CaAa (Out Of Face)	117.00 - 0.00	1	No Ice	0.16	0.66
						1/2" Ice	0.25	1.91
						1" Ice	0.35	3.78
						2" Ice	0.55	9.33
						4" Ice	0.95	27.78
LDF6-50A (1-1/4 FOAM) (Cingular Proposed)	C	No	Inside Pole	117.00 - 0.00	3	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
						2" Ice	0.00	0.66
						4" Ice	0.00	0.66
LDF7-50A (1-5/8	A	No	Inside Pole	147.00 - 0.00	6	No Ice	0.00	0.82



<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b> 150-Ft Monopole Tower	<b>Page</b> 3 of 17
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	<b>Client</b> SBA Network Services, Inc.	<b>Designed by</b> KK

Description	Face	Allow Shield	Component Type	Placement ft	Total Number	C <sub>AA</sub> ft <sup>2</sup> /ft	Weight plf
FOAM)						1/2" Ice 0.00	0.82
						1" Ice 0.00	0.82
						2" Ice 0.00	0.82
						4" Ice 0.00	0.82
LDF7-50A (1-5/8 FOAM)	B	No	Inside Pole	137.00 - 0.00	12	No Ice 0.00	0.82
						1/2" Ice 0.00	0.82
						1" Ice 0.00	0.82
						2" Ice 0.00	0.82
						4" Ice 0.00	0.82
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	130.00 - 0.00	12	No Ice 0.00	0.82
						1/2" Ice 0.00	0.82
						1" Ice 0.00	0.82
						2" Ice 0.00	0.82
						4" Ice 0.00	0.82

### Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight lb
L1	150.00-111.18	A	0.000	0.000	0.000	0.902	191.60
		B	0.000	0.000	0.000	0.902	269.43
		C	0.000	0.000	0.000	0.902	200.55
L2	111.18-76.80	A	0.000	0.000	0.000	5.329	259.91
		B	0.000	0.000	0.000	5.329	429.06
		C	0.000	0.000	0.000	5.329	429.06
L3	76.80-41.84	A	0.000	0.000	0.000	5.418	264.27
		B	0.000	0.000	0.000	5.418	436.25
		C	0.000	0.000	0.000	5.418	436.25
L4	41.84-0.00	A	0.000	0.000	0.000	6.486	316.34
		B	0.000	0.000	0.000	6.486	522.21
		C	0.000	0.000	0.000	6.486	522.21

### Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight lb
L1	150.00-111.18	A	0.500	0.000	0.000	0.000	1.484	198.89
		B		0.000	0.000	0.000	1.484	276.72
		C		0.000	0.000	0.000	1.484	207.84
L2	111.18-76.80	A	0.500	0.000	0.000	0.000	8.767	302.97
		B		0.000	0.000	0.000	8.767	472.12
		C		0.000	0.000	0.000	8.767	472.12
L3	76.80-41.84	A	0.500	0.000	0.000	0.000	8.914	308.04
		B		0.000	0.000	0.000	8.914	480.03
		C		0.000	0.000	0.000	8.914	480.03
L4	41.84-0.00	A	0.500	0.000	0.000	0.000	10.670	368.74
		B		0.000	0.000	0.000	10.670	574.61
		C		0.000	0.000	0.000	10.670	574.61

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b>	150-Ft Monopole Tower	<b>Page</b>	4 of 17
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	<b>Client</b>	SBA Network Services, Inc.	<b>Designed by</b>	KK

**Discrete Tower Loads**

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>A</sub> A <sub>A</sub> Front	C <sub>A</sub> A <sub>A</sub> Side	Weight
			Horz	Lateral					
			ft	ft					
(2) DB980H0E-M (Sprint-Existing)	A	From Face	1.00	0.0000	147.00	No Ice	9.20	4.52	44.55
			0.00			1/2" Ice	9.98	5.57	104.58
			0.00			1" Ice	10.61	6.34	175.21
						2" Ice	11.91	7.90	338.99
						4" Ice	14.68	11.25	790.97
(2) DB980H0E-M (Sprint-Existing)	B	From Face	1.00	0.0000	147.00	No Ice	9.20	4.52	44.55
			0.00			1/2" Ice	9.98	5.57	104.58
			0.00			1" Ice	10.61	6.34	175.21
						2" Ice	11.91	7.90	338.99
						4" Ice	14.68	11.25	790.97
(2) DB980H0E-M (Sprint-Existing)	C	From Face	1.00	0.0000	147.00	No Ice	9.20	4.52	44.55
			0.00			1/2" Ice	9.98	5.57	104.58
			0.00			1" Ice	10.61	6.34	175.21
						2" Ice	11.91	7.90	338.99
						4" Ice	14.68	11.25	790.97
(4) DB844H90E-XY (Verizon- Existing)	A	From Face	1.00	0.0000	137.00	No Ice	2.87	3.73	10.00
			0.00			1/2" Ice	3.18	4.10	35.38
			0.00			1" Ice	3.52	4.48	64.96
						2" Ice	4.27	5.25	137.56
						4" Ice	5.88	6.91	341.85
(4) DB844H90E-XY (Verizon- Existing)	B	From Face	1.00	0.0000	137.00	No Ice	2.87	3.73	10.00
			0.00			1/2" Ice	3.18	4.10	35.38
			0.00			1" Ice	3.52	4.48	64.96
						2" Ice	4.27	5.25	137.56
						4" Ice	5.88	6.91	341.85
(4) DB844H90E-XY (Verizon- Existing)	C	From Face	1.00	0.0000	137.00	No Ice	2.87	3.73	10.00
			0.00			1/2" Ice	3.18	4.10	35.38
			0.00			1" Ice	3.52	4.48	64.96
						2" Ice	4.27	5.25	137.56
						4" Ice	5.88	6.91	341.85
(2) 7250.01 (AT&T- Existng)	A	From Face	1.00	0.0000	130.00	No Ice	4.19	2.05	15.50
			0.00			1/2" Ice	4.58	2.47	36.26
			0.00			1" Ice	4.99	2.85	61.82
						2" Ice	5.81	3.63	128.18
						4" Ice	7.79	5.28	327.20
(2) 7250.01 (AT&T- Existing)	B	From Face	1.00	0.0000	130.00	No Ice	4.19	2.05	15.50
			0.00			1/2" Ice	4.58	2.47	36.26
			0.00			1" Ice	4.99	2.85	61.82
						2" Ice	5.81	3.63	128.18
						4" Ice	7.79	5.28	327.20
(2) 7250.01 (AT&T- Existing)	C	From Face	1.00	0.0000	130.00	No Ice	4.19	2.05	15.50
			0.00			1/2" Ice	4.58	2.47	36.26
			0.00			1" Ice	4.99	2.85	61.82
						2" Ice	5.81	3.63	128.18
						4" Ice	7.79	5.28	327.20
(3) DUO-1417-8686-40 (Cingular-PROPOSED)	A	From Face	1.00	0.0000	117.00	No Ice	6.53	4.20	20.30
			0.00			1/2" Ice	6.94	4.57	62.49
			0.00			1" Ice	7.35	4.96	109.49
						2" Ice	8.21	5.75	218.63
						4" Ice	10.02	7.43	503.04
(3) DUO-1417-8686-40 (Cingular-PROPOSED)	B	From Face	1.00	0.0000	117.00	No Ice	6.53	4.20	20.30
			0.00			1/2" Ice	6.94	4.57	62.49
			0.00			1" Ice	7.35	4.96	109.49
						2" Ice	8.21	5.75	218.63

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	Job	150-Ft Monopole Tower	Page	5 of 17
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	Client	SBA Network Services, Inc.	Designed by	KK

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub>		Weight	
			Horz	Vert			Front	Side		
			ft	ft	deg	ft	ft <sup>2</sup>	ft <sup>2</sup>	lb	
(3) DUO-1417-8686-40 (Cingular-PROPOSED)	C	From Face	1.00		0.0000	117.00	4" Ice	10.02	7.43	503.04
			0.00				No Ice	6.53	4.20	20.30
			0.00				1/2" Ice	6.94	4.57	62.49
							1" Ice	7.35	4.96	109.49
							2" Ice	8.21	5.75	218.63
PiROD 13' Low Profile Platform (Monopole)	A	None			0.0000	147.00	4" Ice	10.02	7.43	503.04
							No Ice	15.70	15.70	1300.00
							1/2" Ice	20.10	20.10	1765.00
							1" Ice	24.50	24.50	2230.00
							2" Ice	33.30	33.30	3160.00
PiROD 13' Low Profile Platform (Monopole)	B	None			0.0000	137.00	4" Ice	50.90	50.90	5020.00
							No Ice	15.70	15.70	1300.00
							1/2" Ice	20.10	20.10	1765.00
							1" Ice	24.50	24.50	2230.00
							2" Ice	33.30	33.30	3160.00
PiROD 13' Low Profile Platform (Monopole)	C	None			0.0000	130.00	4" Ice	50.90	50.90	5020.00
							No Ice	15.70	15.70	1300.00
							1/2" Ice	20.10	20.10	1765.00
							1" Ice	24.50	24.50	2230.00
							2" Ice	33.30	33.30	3160.00
PiROD 13' Low Profile Platform (Monopole)	A	None			0.0000	117.00	4" Ice	50.90	50.90	5020.00
							No Ice	15.70	15.70	1300.00
							1/2" Ice	20.10	20.10	1765.00
							1" Ice	24.50	24.50	2230.00
							2" Ice	33.30	33.30	3160.00
DUO-1417-8686-40 (Cingular - Future)	A	From Face	1.00		0.0000	117.00	4" Ice	50.90	50.90	5020.00
			0.00				No Ice	6.53	4.20	20.30
			0.00				1/2" Ice	6.94	4.57	62.49
							1" Ice	7.35	4.96	109.49
							2" Ice	8.21	5.75	218.63
DUO-1417-8686-40 (Cingular - Future)	B	From Face	1.00		0.0000	117.00	4" Ice	10.02	7.43	503.04
			0.00				No Ice	6.53	4.20	20.30
			0.00				1/2" Ice	6.94	4.57	62.49
							1" Ice	7.35	4.96	109.49
							2" Ice	8.21	5.75	218.63
DUO-1417-8686-40 (Cingular - Future)	C	From Face	1.00		0.0000	117.00	4" Ice	10.02	7.43	503.04
			0.00				No Ice	6.53	4.20	20.30
			0.00				1/2" Ice	6.94	4.57	62.49
							1" Ice	7.35	4.96	109.49
							2" Ice	8.21	5.75	218.63
(2) TTA'S (Cingular - Proposed)	A	From Face	1.00		0.0000	117.00	4" Ice	10.02	7.43	503.04
			0.00				No Ice	0.00	0.82	28.66
			0.00				1/2" Ice	0.00	0.95	39.55
							1" Ice	0.00	1.09	52.64
							2" Ice	0.00	1.40	86.22
(2) TTA'S (Cingular - Proposed)	B	From Face	1.00		0.0000	117.00	4" Ice	0.00	2.13	188.36
			0.00				No Ice	0.00	0.82	28.66
			0.00				1/2" Ice	0.00	0.95	39.55
							1" Ice	0.00	1.09	52.64
							2" Ice	0.00	1.40	86.22
(2) TTA'S (Cingular - Proposed)	C	From Face	1.00		0.0000	117.00	4" Ice	0.00	2.13	188.36
			0.00				No Ice	0.00	0.82	28.66
			0.00				1/2" Ice	0.00	0.95	39.55
							1" Ice	0.00	1.09	52.64
							2" Ice	0.00	1.40	86.22
Combiner (Cingular -	A	From Face	1.00		0.0000	117.00	4" Ice	0.00	2.13	188.36
							No Ice	0.00	0.21	16.00

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b> 150-Ft Monopole Tower	<b>Page</b> 6 of 17
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	<b>Client</b> SBA Network Services, Inc.	<b>Designed by</b> KK

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment deg	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight lb
Proposed)			0.00			1/2" Ice 0.00	0.29	21.36
			0.00			1" Ice 0.00	0.37	28.33
						2" Ice 0.00	0.56	47.91
						4" Ice 0.00	1.04	115.02
Combiner (Cingular - Proposed)	B	From Face	1.00	0.0000	117.00	No Ice 0.00	0.21	16.00
			0.00			1/2" Ice 0.00	0.29	21.36
			0.00			1" Ice 0.00	0.37	28.33
						2" Ice 0.00	0.56	47.91
						4" Ice 0.00	1.04	115.02
Combiner (Cingular - Proposed)	C	From Face	1.00	0.0000	117.00	No Ice 0.86	0.21	16.00
			0.00			1/2" Ice 0.00	0.29	21.36
			0.00			1" Ice 0.00	0.37	28.33
						2" Ice 0.00	0.56	47.91
						4" Ice 0.00	1.04	115.02

### Compression Checks

### Pole Design Data

Section No.	Elevation ft	Size	L ft	L <sub>n</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P lb	Allow. P <sub>a</sub> lb	Ratio P/P <sub>a</sub>
L1	150 - 148.162	TP27.116x19.5x0.1875	38.82	0.00	0.0	39.000	11.7080	-92.59	456612.00	0.000
	148.162 - 146.323					39.000	11.9226	-2393.39	464983.00	0.005
	146.323 - 144.485					39.000	12.1373	-1543.55	473354.00	0.003
	144.485 - 142.646					39.000	12.3519	-1640.03	481726.00	0.003
	142.646 - 140.808					39.000	12.5666	-1737.98	490097.00	0.004
	140.808 - 138.969					39.000	12.7812	-1837.41	498468.00	0.004
	138.969 - 137.131					39.000	12.9959	-1938.33	506839.00	0.004
	137.131 - 135.293					39.000	13.2105	-3174.08	515211.00	0.006
	135.293 - 133.454					39.000	13.4252	-3279.56	523582.00	0.006
	133.454 - 131.616					39.000	13.6398	-3387.05	531953.00	0.006
	131.616 - 129.777					39.000	13.8545	-4713.97	540324.00	0.009
	129.777 - 127.939					39.000	14.0691	-4826.87	548695.00	0.009
	127.939 - 126.101					39.000	14.2838	-4942.10	557067.00	0.009
	126.101 -					39.000	14.4984	-5059.67	565438.00	0.009

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	Job	150-Ft Monopole Tower	Page	7 of 17
	Project	E- Prospect, CT02694-B	Date	12:37:06 11/20/03
	Client	SBA Network Services, Inc.	Designed by	KK

Section No.	Elevation ft	Size	L ft	L <sub>n</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P lb	Allow. P <sub>a</sub> lb	Ratio P/P <sub>a</sub>
	124.262									
	124.262 - 122.424					39.000	14.7131	-5179.55	573809.00	0.009
	122.424 - 120.585					39.000	14.9277	-5301.69	582180.00	0.009
	120.585 - 118.747					39.000	15.1423	-5426.09	590552.00	0.009
	118.747 - 116.908					39.000	15.3570	-6940.73	598923.00	0.012
	116.908 - 115.07					39.000	15.5716	-7075.15	607294.00	0.012
L2	115.07 - 111.18	TP33.3629x25.9778x0.25	38.27	0.00	0.0	39.000	16.0258	-3306.71	625007.00	0.005
	111.18 - 109.529					39.000	21.0107	-4308.75	819417.00	0.005
	109.529 - 107.879					39.000	21.2634	-7793.84	829274.00	0.009
	107.879 - 106.228					39.000	21.5162	-7972.13	839131.00	0.010
	106.228 - 104.578					39.000	21.7689	-8152.85	848988.00	0.010
	104.578 - 102.927					39.000	22.0217	-8335.96	858845.00	0.010
	102.927 - 101.276					39.000	22.2744	-8521.43	868703.00	0.010
	101.276 - 99.6257					39.000	22.5272	-8709.25	878560.00	0.010
	99.6257 - 97.9751					39.000	22.7799	-8899.40	888417.00	0.010
	97.9751 - 96.3245					39.000	23.0327	-9091.85	898274.00	0.010
	96.3245 - 94.6739					39.000	23.2854	-9286.58	908131.00	0.010
	94.6739 - 93.0233					39.000	23.5382	-9483.57	917989.00	0.010
	93.0233 - 91.3727					39.000	23.7909	-9682.81	927846.00	0.010
	91.3727 - 89.7221					39.000	24.0437	-9884.28	937703.00	0.011
	89.7221 - 88.0714					39.000	24.2964	-10088.00	947560.00	0.011
	88.0714 - 86.4208					39.000	24.5492	-10293.80	957417.00	0.011
	86.4208 - 84.7702					39.000	24.8019	-10501.90	967274.00	0.011
	84.7702 - 83.1196					39.000	25.0547	-10712.20	977132.00	0.011
	83.1196 - 81.469					39.000	25.3074	-10924.50	986989.00	0.011
L3	81.469 - 76.8	TP39.4834x31.9619x0.3125	39.63	0.00	0.0	39.000	25.5602	-11139.10	996846.00	0.011
	81.469 - 76.8					39.000	26.2751	-5514.16	1024730.00	0.005
	76.8 - 75.1599					39.000	32.2713	-6696.91	1258580.00	0.005
	75.1599 - 73.5198					39.000	32.5801	-12468.70	1270620.00	0.010
	73.5198 - 71.8797					39.000	32.8889	-12721.40	1282670.00	0.010
	71.8797 - 70.2396					39.000	33.1977	-12976.50	1294710.00	0.010
	70.2396 - 68.5994					39.000	33.5065	-13233.80	1306750.00	0.010
	68.5994					39.000	33.8153	-13493.30	1318800.00	0.010

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b>	150-Ft Monopole Tower	<b>Page</b>	8 of 17
	<b>Project</b>	E- Prospect, CT02694-B	<b>Date</b>	12:37:06 11/20/03
	<b>Client</b>	SBA Network Services, Inc.	<b>Designed by</b>	KK

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P lb	Allow. P <sub>a</sub> lb	Ratio P P <sub>a</sub>
	68.5994 - 66.9593					39.000	34.1241	-13755.10	1330840.00	0.010
	66.9593 - 65.3192					39.000	34.4328	-14019.20	1342880.00	0.010
	65.3192 - 63.6791					39.000	34.7416	-14285.40	1354920.00	0.011
	63.6791 - 62.039					39.000	35.0504	-14553.90	1366970.00	0.011
	62.039 - 60.3989					39.000	35.3592	-14824.60	1379010.00	0.011
	60.3989 - 58.7588					39.000	35.6680	-15097.50	1391050.00	0.011
	58.7588 - 57.1187					39.000	35.9768	-15372.50	1403100.00	0.011
	57.1187 - 55.4786					39.000	36.2856	-15649.80	1415140.00	0.011
	55.4786 - 53.8384					39.000	36.5944	-15929.30	1427180.00	0.011
	53.8384 - 52.1983					39.000	36.9032	-16210.90	1439220.00	0.011
	52.1983 - 50.5582					39.000	37.2120	-16494.60	1451270.00	0.011
	50.5582 - 48.9181					39.000	37.5208	-16780.60	1463310.00	0.011
	48.9181 - 47.278					39.000	37.8296	-17068.60	1475350.00	0.012
	47.278 - 41.844					39.000	38.8526	-8675.53	1515250.00	0.006
L4	47.278 - 41.844	TP47x37.8269x0.375	47.28	0.00	0.0	39.000	45.8321	-10134.70	1787450.00	0.006
	41.844 - 39.6417					39.000	46.3407	-19263.80	1807290.00	0.011
	39.6417 - 37.4394					39.000	46.8493	-19715.70	1827120.00	0.011
	37.4394 - 35.2371					39.000	47.3579	-20171.80	1846960.00	0.011
	35.2371 - 33.0347					39.000	47.8665	-20632.10	1866790.00	0.011
	33.0347 - 30.8324					39.000	48.3751	-21096.70	1886630.00	0.011
	30.8324 - 28.6301					39.000	48.8837	-21565.50	1906460.00	0.011
	28.6301 - 26.4278					39.000	49.3923	-22038.60	1926300.00	0.011
	26.4278 - 24.2255					39.000	49.9008	-22515.90	1946130.00	0.012
	24.2255 - 22.0232					39.000	50.4094	-22997.40	1965970.00	0.012
	22.0232 - 19.8208					39.000	50.9180	-23483.10	1985800.00	0.012
	19.8208 - 17.6185					39.000	51.4266	-23973.10	2005640.00	0.012
	17.6185 - 15.4162					39.000	51.9352	-24467.30	2025470.00	0.012
	15.4162 - 13.2139					39.000	52.4438	-24965.70	2045310.00	0.012
	13.2139 - 11.0116					39.000	52.9524	-25468.30	2065140.00	0.012
	11.0116 - 8.80926					39.000	53.4610	-25975.20	2084980.00	0.012
	8.80926 - 6.60695					39.000	53.9696	-26486.20	2104820.00	0.013

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b> 150-Ft Monopole Tower	<b>Page</b> 9 of 17
	<b>Project</b> E- Prospect, CT02694-B	<b>Date</b> 12:37:06 11/20/03
	<b>Client</b> SBA Network Services, Inc.	<b>Designed by</b> KK

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P lb	Allow. P <sub>a</sub> lb	Ratio P/P <sub>a</sub>
	6.60695 - 4.40463					39.000	54.4782	-27001.50	2124650.00	0.013
	4.40463 - 2.20232					39.000	54.9868	-27521.00	2144490.00	0.013
	2.20232 - 0					39.000	55.4954	-28044.70	2164320.00	0.013

### Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M <sub>x</sub> lb-ft	Actual f <sub>bx</sub> ksi	Allow. F <sub>bx</sub> ksi	Ratio f <sub>bx</sub> /F <sub>bx</sub>	Actual M <sub>y</sub> lb-ft	Actual f <sub>by</sub> ksi	Allow. F <sub>by</sub> ksi	Ratio f <sub>by</sub> /F <sub>by</sub>		
L1	150 - 148.162	TP27.116x19.5x0.1875	101.72	0.022	39.000	0.001	0.00	0.000	39.000	0.000		
	148.162 - 146.323		2110.42	0.430	39.000	0.011	0.00	0.000	39.000	0.000		
	146.323 - 144.485		8155.36	1.604	39.000	0.041	0.00	0.000	39.000	0.000		
	144.485 - 142.646		14163.9	2.690	39.000	0.069	0.00	0.000	39.000	0.000		
	142.646 - 140.808		20383.3	3.739	39.000	0.096	0.00	0.000	39.000	0.000		
	140.808 - 138.969		26816.0	4.755	39.000	0.122	0.00	0.000	39.000	0.000		
	138.969 - 137.131		33464.6	5.739	39.000	0.147	0.00	0.000	39.000	0.000		
	137.131 - 135.293		44997.0	7.466	39.000	0.191	0.00	0.000	39.000	0.000		
	135.293 - 133.454		57108.9	9.174	39.000	0.235	0.00	0.000	39.000	0.000		
	133.454 - 131.616		69442.4	10.806	39.000	0.277	0.00	0.000	39.000	0.000		
	131.616 - 129.777		82385.6	12.424	39.000	0.319	0.00	0.000	39.000	0.000		
	129.777 - 127.939		98345.0	14.380	39.000	0.369	0.00	0.000	39.000	0.000		
	127.939 - 126.101		114530.	16.245	39.000	0.417	0.00	0.000	39.000	0.000		
	126.101 - 124.262		130940.	18.025	39.000	0.462	0.00	0.000	39.000	0.000		
	124.262 - 122.424		147580.	19.725	39.000	0.506	0.00	0.000	39.000	0.000		
	122.424 - 120.585		164450.	21.350	39.000	0.547	0.00	0.000	39.000	0.000		
	120.585 - 118.747		181551.	22.904	39.000	0.587	0.00	0.000	39.000	0.000		
	118.747 - 116.908		199245.	24.436	39.000	0.627	0.00	0.000	39.000	0.000		
	116.908 - 115.07		223985.	26.716	39.000	0.685	0.00	0.000	39.000	0.000		
	115.07 - 111.18		122295.	13.769	39.000	0.353	0.00	0.000	39.000	0.000		
	L2		115.07 - 111.18	TP33.3629x25.9778x0.25	154908.	13.562	39.000	0.348	0.00	0.000	39.000	0.000
			111.18 - 109.529		300157.	25.655	39.000	0.658	0.00	0.000	39.000	0.000
			109.529 - 107.879		323345.	26.988	39.000	0.692	0.00	0.000	39.000	0.000
			00									



<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b> 150-Ft Monopole Tower	<b>Page</b> 10 of 17
	<b>Project</b> E- Prospect, CT02694-B	<b>Date</b> 12:37:06 11/20/03
	<b>Client</b> SBA Network Services, Inc.	<b>Designed by</b> KK

Section No.	Elevation ft	Size	Actual $M_x$ lb-ft	Actual $f_{bx}$ ksi	Allow. $F_{bx}$ ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual $M_y$ lb-ft	Actual $f_{by}$ ksi	Allow. $F_{by}$ ksi	Ratio $\frac{f_{by}}{F_{by}}$
	107.879 - 106.228		346766.67	28.272	39.000	0.725	0.00	0.000	39.000	0.000
	106.228 - 104.578		370422.50	29.508	39.000	0.757	0.00	0.000	39.000	0.000
	104.578 - 102.927		394313.33	30.700	39.000	0.787	0.00	0.000	39.000	0.000
	102.927 - 101.276		418438.33	31.848	39.000	0.817	0.00	0.000	39.000	0.000
	101.276 - 99.6257		442800.00	32.955	39.000	0.845	0.00	0.000	39.000	0.000
	99.6257 - 97.9751		467397.50	34.023	39.000	0.872	0.00	0.000	39.000	0.000
	97.9751 - 96.3245		492230.83	35.054	39.000	0.899	0.00	0.000	39.000	0.000
	96.3245 - 94.6739		517301.67	36.049	39.000	0.924	0.00	0.000	39.000	0.000
	94.6739 - 93.0233		542610.00	37.011	39.000	0.949	0.00	0.000	39.000	0.000
	93.0233 - 91.3727		568155.00	37.939	39.000	0.973	0.00	0.000	39.000	0.000
	91.3727 - 89.7221		593939.17	38.837	39.000	0.996	0.00	0.000	39.000	0.000
	89.7221 - 88.0714		619960.83	39.705	39.000	1.018	0.00	0.000	39.000	0.000
	88.0714 - 86.4208		646222.50	40.544	39.000	1.040	0.00	0.000	39.000	0.000
	86.4208 - 84.7702		672722.50	41.356	39.000	1.060	0.00	0.000	39.000	0.000
	84.7702 - 83.1196		699462.50	42.142	39.000	1.081	0.00	0.000	39.000	0.000
	83.1196 - 81.469		726442.50	42.903	39.000	1.100	0.00	0.000	39.000	0.000
	81.469 - 76.8		368033.33	20.565	39.000	0.527	0.00	0.000	39.000	0.000
L3	81.469 - 76.8	TP39.4834x31.9619x0.3125	436179.17	20.237	39.000	0.519	0.00	0.000	39.000	0.000
	76.8 - 75.1599		832037.50	37.872	39.000	0.971	0.00	0.000	39.000	0.000
	75.1599 - 73.5198		860083.33	38.413	39.000	0.985	0.00	0.000	39.000	0.000
	73.5198 - 71.8797		888366.67	38.938	39.000	0.998	0.00	0.000	39.000	0.000
	71.8797 - 70.2396		916866.67	39.447	39.000	1.011	0.00	0.000	39.000	0.000
	70.2396 - 68.5994		945591.67	39.940	39.000	1.024	0.00	0.000	39.000	0.000
	68.5994 - 66.9593		974541.67	40.417	39.000	1.036	0.00	0.000	39.000	0.000
	66.9593 - 65.3192		1003708.33	40.881	39.000	1.048	0.00	0.000	39.000	0.000
	65.3192 - 63.6791		1033108.33	41.330	39.000	1.060	0.00	0.000	39.000	0.000
	63.6791 - 62.039		1062725.00	41.766	39.000	1.071	0.00	0.000	39.000	0.000
	62.039 - 60.3989		1092558.33	42.189	39.000	1.082	0.00	0.000	39.000	0.000
	60.3989 - 58.7588		1122616.67	42.599	39.000	1.092	0.00	0.000	39.000	0.000
	58.7588 - 57.1187		1152900.00	42.997	39.000	1.102	0.00	0.000	39.000	0.000

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b>	150-Ft Monopole Tower	<b>Page</b>	11 of 17
	<b>Project</b>	E- Prospect, CT02694-B	<b>Date</b>	12:37:06 11/20/03
	<b>Client</b>	SBA Network Services, Inc.	<b>Designed by</b>	KK

Section No.	Elevation ft	Size	Actual $M_x$ lb-ft	Actual $f_{bx}$ ksi	Allow. $F_{bx}$ ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual $M_y$ lb-ft	Actual $f_{by}$ ksi	Allow. $F_{by}$ ksi	Ratio $\frac{f_{by}}{F_{by}}$
	57.1187 - 55.4786		1183400.00	43.383	39.000	1.112	0.00	0.000	39.000	0.000
	55.4786 - 53.8384		1214116.67	43.758	39.000	1.122	0.00	0.000	39.000	0.000
	53.8384 - 52.1983		1245058.33	44.122	39.000	1.131	0.00	0.000	39.000	0.000
	52.1983 - 50.5582		1276208.33	44.476	39.000	1.140	0.00	0.000	39.000	0.000
	50.5582 - 48.9181		1307583.33	44.819	39.000	1.149	0.00	0.000	39.000	0.000
	48.9181 - 47.278		1339166.67	45.153	39.000	1.158	0.00	0.000	39.000	0.000
	47.278 - 41.844		676200.00	21.610	39.000	0.554	0.00	0.000	39.000	0.000
L4	47.278 - 41.844	TP47x37.8269x0.375	769382.50	21.240	39.000	0.545	0.00	0.000	39.000	0.000
	41.844 - 39.6417		1489441.67	40.217	39.000	1.031	0.00	0.000	39.000	0.000
	39.6417 - 37.4394		1533641.67	40.512	39.000	1.039	0.00	0.000	39.000	0.000
	37.4394 - 35.2371		1578175.00	40.794	39.000	1.046	0.00	0.000	39.000	0.000
	35.2371 - 33.0347		1623050.00	41.063	39.000	1.053	0.00	0.000	39.000	0.000
	33.0347 - 30.8324		1668275.00	41.320	39.000	1.059	0.00	0.000	39.000	0.000
	30.8324 - 28.6301		1713833.33	41.566	39.000	1.066	0.00	0.000	39.000	0.000
	28.6301 - 26.4278		1759741.67	41.801	39.000	1.072	0.00	0.000	39.000	0.000
	26.4278 - 24.2255		1806000.00	42.026	39.000	1.078	0.00	0.000	39.000	0.000
	24.2255 - 22.0232		1852600.00	42.241	39.000	1.083	0.00	0.000	39.000	0.000
	22.0232 - 19.8208		1899541.67	42.447	39.000	1.088	0.00	0.000	39.000	0.000
	19.8208 - 17.6185		1946841.67	42.644	39.000	1.093	0.00	0.000	39.000	0.000
	17.6185 - 15.4162		1994491.67	42.832	39.000	1.098	0.00	0.000	39.000	0.000
	15.4162 - 13.2139		2042491.67	43.013	39.000	1.103	0.00	0.000	39.000	0.000
	13.2139 - 11.0116		2090841.67	43.186	39.000	1.107	0.00	0.000	39.000	0.000
	11.0116 - 8.80926		2139550.00	43.352	39.000	1.112	0.00	0.000	39.000	0.000
	8.80926 - 6.60695		2188616.67	43.510	39.000	1.116	0.00	0.000	39.000	0.000
	6.60695 - 4.40463		2238033.33	43.663	39.000	1.120	0.00	0.000	39.000	0.000
	4.40463 - 2.20232		2287808.33	43.809	39.000	1.123	0.00	0.000	39.000	0.000
	2.20232 - 0		2337941.67	43.949	39.000	1.127	0.00	0.000	39.000	0.000

**Pole Shear Design Data**

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b> 150-Ft Monopole Tower	<b>Page</b> 12 of 17
	<b>Project</b> E- Prospect, CT02694-B	<b>Date</b> 12:37:06 11/20/03
	<b>Client</b> SBA Network Services, Inc.	<b>Designed by</b> KK

Section No.	Elevation ft	Size	Actual V lb	Actual $f_v$ ksi	Allow. $F_v$ ksi	Ratio $\frac{f_v}{F_v}$	Actual T lb-ft	Actual $f_v$ ksi	Allow. $F_v$ ksi	Ratio $\frac{f_v}{F_v}$
L1	150 - 148.162	TP27.116x19.5x0.1875	110.92	0.009	26.000	0.001	0.00	0.000	26.000	0.000
	148.162 - 146.323		2801.49	0.235	26.000	0.018	0.00	0.000	26.000	0.000
	146.323 - 144.485		3212.96	0.265	26.000	0.020	0.02	0.000	26.000	0.000
	144.485 - 142.646		3327.08	0.269	26.000	0.021	0.03	0.000	26.000	0.000
	142.646 - 140.808		3442.60	0.274	26.000	0.021	0.03	0.000	26.000	0.000
	140.808 - 138.969		3559.49	0.278	26.000	0.021	0.03	0.000	26.000	0.000
	138.969 - 137.131		3677.75	0.283	26.000	0.022	0.03	0.000	26.000	0.000
	137.131 - 135.293		6530.79	0.494	26.000	0.038	0.03	0.000	26.000	0.000
	135.293 - 133.454		6651.06	0.495	26.000	0.038	0.00	0.000	26.000	0.000
	133.454 - 131.616		6772.42	0.497	26.000	0.038	0.00	0.000	26.000	0.000
	131.616 - 129.777		8623.75	0.622	26.000	0.048	0.02	0.000	26.000	0.000
	129.777 - 127.939		8746.26	0.622	26.000	0.048	0.03	0.000	26.000	0.000
	127.939 - 126.101		8869.59	0.621	26.000	0.048	0.03	0.000	26.000	0.000
	126.101 - 124.262		8993.75	0.620	26.000	0.048	0.03	0.000	26.000	0.000
	124.262 - 122.424		9118.72	0.620	26.000	0.048	0.03	0.000	26.000	0.000
	122.424 - 120.585		9244.51	0.619	26.000	0.048	0.03	0.000	26.000	0.000
	120.585 - 118.747		9371.13	0.619	26.000	0.048	0.03	0.000	26.000	0.000
	118.747 - 116.908		13401.2	0.873	26.000	0.067	0.07	0.000	26.000	0.000
	116.908 - 115.07		0	0.869	26.000	0.067	0.07	0.000	26.000	0.000
	115.07 - 111.18		6180.70	0.386	26.000	0.030	0.00	0.000	26.000	0.000
L2	115.07 - 111.18	TP33.3629x25.9778x0.25	7661.32	0.365	26.000	0.028	0.00	0.000	26.000	0.000
	111.18 - 109.529		13982.4	0.658	26.000	0.051	0.00	0.000	26.000	0.000
	109.529 - 107.879		0	0.656	26.000	0.050	0.00	0.000	26.000	0.000
	107.879 - 106.228		14124.2	0.656	26.000	0.050	0.00	0.000	26.000	0.000
	106.228 - 104.578		0	0.655	26.000	0.050	0.00	0.000	26.000	0.000
	104.578 - 102.927		14266.4	0.655	26.000	0.050	0.00	0.000	26.000	0.000
	102.927 - 101.276		0	0.654	26.000	0.050	0.00	0.000	26.000	0.000
	101.276 - 99.6257		14408.7	0.654	26.000	0.050	0.00	0.000	26.000	0.000
	99.6257 - 97.9751		0	0.653	26.000	0.050	0.00	0.000	26.000	0.000
	97.9751 - 96.3245		14551.4	0.653	26.000	0.050	0.00	0.000	26.000	0.000
	96.3245 - 94.6739		0	0.652	26.000	0.050	0.00	0.000	26.000	0.000
	94.6739 - 93.0233		14694.3	0.652	26.000	0.050	0.00	0.000	26.000	0.000

<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583 7088 FAX: (281) 583 5495	<b>Job</b>	150-Ft Monopole Tower	<b>Page</b>	13 of 17
	<b>Project</b>	E- Prospect, CT02694-B	<b>Date</b>	12:37:06 11/20/03
	<b>Client</b>	SBA Network Services, Inc.	<b>Designed by</b>	KK

Section No.	Elevation ft	Size	Actual V lb	Actual f <sub>v</sub> ksi	Allow. F <sub>v</sub> ksi	Ratio $\frac{f_v}{F_v}$	Actual T lb-ft	Actual f <sub>vt</sub> ksi	Allow. F <sub>vt</sub> ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
	94.6739		0							
	94.6739 -		15412.7	0.648	26.000	0.050	0.00	0.000	26.000	0.000
	93.0233		0							
	93.0233 -		15557.1	0.647	26.000	0.050	0.00	0.000	26.000	0.000
	91.3727		0							
	91.3727 -		15701.7	0.646	26.000	0.050	0.00	0.000	26.000	0.000
	89.7221		0							
	89.7221 -		15846.6	0.646	26.000	0.050	0.00	0.000	26.000	0.000
	88.0714		0							
	88.0714 -		15991.7	0.645	26.000	0.050	0.00	0.000	26.000	0.000
	86.4208		0							
	86.4208 -		16137.1	0.644	26.000	0.050	0.00	0.000	26.000	0.000
	84.7702		0							
	84.7702 -		16282.6	0.643	26.000	0.049	0.00	0.000	26.000	0.000
	83.1196		0							
	83.1196 -		16428.4	0.643	26.000	0.049	0.00	0.000	26.000	0.000
	81.469		0							
	81.469 - 76.8		7857.51	0.299	26.000	0.023	0.00	0.000	26.000	0.000
L3	81.469 - 76.8	TP39.4834x31.9619x0.3125	9052.58	0.281	26.000	0.022	0.00	0.000	26.000	0.000
	76.8 - 75.1599		17043.6	0.523	26.000	0.040	0.00	0.000	26.000	0.000
			0							
	75.1599 -		17181.5	0.522	26.000	0.040	0.00	0.000	26.000	0.000
	73.5198		0							
	73.5198 -		17319.1	0.522	26.000	0.040	0.00	0.000	26.000	0.000
	71.8797		0							
	71.8797 -		17456.4	0.521	26.000	0.040	0.00	0.000	26.000	0.000
	70.2396		0							
	70.2396 -		17593.3	0.520	26.000	0.040	0.00	0.000	26.000	0.000
	68.5994		0							
	68.5994 -		17729.8	0.520	26.000	0.040	0.00	0.000	26.000	0.000
	66.9593		0							
	66.9593 -		17866.0	0.519	26.000	0.040	0.00	0.000	26.000	0.000
	65.3192		0							
	65.3192 -		18001.8	0.518	26.000	0.040	0.00	0.000	26.000	0.000
	63.6791		0							
	63.6791 -		18137.3	0.517	26.000	0.040	0.00	0.000	26.000	0.000
	62.039		0							
	62.039 -		18272.4	0.517	26.000	0.040	0.00	0.000	26.000	0.000
	60.3989		0							
	60.3989 -		18407.2	0.516	26.000	0.040	0.00	0.000	26.000	0.000
	58.7588		0							
	58.7588 -		18541.6	0.515	26.000	0.040	0.00	0.000	26.000	0.000
	57.1187		0							
	57.1187 -		18675.6	0.515	26.000	0.040	0.00	0.000	26.000	0.000
	55.4786		0							
	55.4786 -		18809.2	0.514	26.000	0.040	0.00	0.000	26.000	0.000
	53.8384		0							
	53.8384 -		18942.4	0.513	26.000	0.039	0.00	0.000	26.000	0.000
	52.1983		0							
	52.1983 -		19075.3	0.513	26.000	0.039	0.00	0.000	26.000	0.000
	50.5582		0							
	50.5582 -		19207.8	0.512	26.000	0.039	0.00	0.000	26.000	0.000
	48.9181		0							
	48.9181 -		19339.8	0.511	26.000	0.039	0.00	0.000	26.000	0.000
	47.278		0							
	47.278 -		9422.32	0.243	26.000	0.019	0.00	0.000	26.000	0.000
	41.844									
L4	47.278 -	TP47x37.8269x0.375	10438.7	0.228	26.000	0.018	0.00	0.000	26.000	0.000
	41.844		0							
	41.844 -		20009.4	0.432	26.000	0.033	0.00	0.000	26.000	0.000

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	<b>Project</b> E- Prospect, CT02694-B	<b>Date</b> 12:37:06 11/20/03
	<b>Client</b> SBA Network Services, Inc.	<b>Designed by</b> KK

Section No.	Elevation ft	Size	Actual V lb	Actual f <sub>v</sub> ksi	Allow. F <sub>v</sub> ksi	Ratio $\frac{f_v}{F_v}$	Actual T lb-ft	Actual f <sub>vt</sub> ksi	Allow. F <sub>vt</sub> ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
	39.6417		0							
	39.6417 -		20163.7	0.430	26.000	0.033	0.00	0.000	26.000	0.000
	37.4394		0							
	37.4394 -		20318.5	0.429	26.000	0.033	0.00	0.000	26.000	0.000
	35.2371		0							
	35.2371 -		20474.0	0.428	26.000	0.033	0.00	0.000	26.000	0.000
	33.0347		0							
	33.0347 -		20630.0	0.426	26.000	0.033	0.00	0.000	26.000	0.000
	30.8324		0							
	30.8324 -		20786.5	0.425	26.000	0.033	0.00	0.000	26.000	0.000
	28.6301		0							
	28.6301 -		20943.6	0.424	26.000	0.033	0.00	0.000	26.000	0.000
	26.4278		0							
	26.4278 -		21101.2	0.423	26.000	0.033	0.00	0.000	26.000	0.000
	24.2255		0							
	24.2255 -		21259.3	0.422	26.000	0.032	0.00	0.000	26.000	0.000
	22.0232		0							
	22.0232 -		21418.0	0.421	26.000	0.032	0.00	0.000	26.000	0.000
	19.8208		0							
	19.8208 -		21577.2	0.420	26.000	0.032	0.00	0.000	26.000	0.000
	17.6185		0							
	17.6185 -		21736.9	0.419	26.000	0.032	0.00	0.000	26.000	0.000
	15.4162		0							
	15.4162 -		21897.1	0.418	26.000	0.032	0.00	0.000	26.000	0.000
	13.2139		0							
	13.2139 -		22057.9	0.417	26.000	0.032	0.00	0.000	26.000	0.000
	11.0116		0							
	11.0116 -		22219.1	0.416	26.000	0.032	0.00	0.000	26.000	0.000
	8.80926		0							
	8.80926 -		22380.9	0.415	26.000	0.032	0.00	0.000	26.000	0.000
	6.60695		0							
	6.60695 -		22543.2	0.414	26.000	0.032	0.00	0.000	26.000	0.000
	4.40463		0							
	4.40463 -		22705.9	0.413	26.000	0.032	0.00	0.000	26.000	0.000
	2.20232		0							
	2.20232 - 0		22869.2	0.412	26.000	0.032	0.00	0.000	26.000	0.000
			0							

**Pole Interaction Design Data**

Section No.	Elevation ft	Ratio P	Ratio f <sub>bx</sub>	Ratio f <sub>by</sub>	Ratio f <sub>v</sub>	Ratio f <sub>vt</sub>	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		P <sub>a</sub>	F <sub>bx</sub>	F <sub>by</sub>	F <sub>v</sub>	F <sub>vt</sub>			
L1	150 - 148.162	0.000	0.001	0.000	0.001	0.000	0.001 ✓	1.333	H1-3+VT ✓
	148.162 - 146.323	0.005	0.011	0.000	0.018	0.000	0.016 ✓	1.333	H1-3+VT ✓
	146.323 - 144.485	0.003	0.041	0.000	0.020	0.000	0.045 ✓	1.333	H1-3+VT ✓
	144.485 - 142.646	0.003	0.069	0.000	0.021	0.000	0.072 ✓	1.333	H1-3+VT ✓
	142.646 - 140.808	0.004	0.096	0.000	0.021	0.000	0.100 ✓	1.333	H1-3+VT ✓
	140.808 - 138.969	0.004	0.122	0.000	0.021	0.000	0.126 ✓	1.333	H1-3+VT ✓

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	<b>Project</b> E- Prospect, CT02694-B	<b>Date</b> 12:37:06 11/20/03
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Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$P$	$f_{bx}$	$f_{by}$	$f_v$	$f_{vt}$			
	138.969 - 137.131	0.004	0.147	0.000	0.022	0.000	0.151 ✓	1.333	H1-3+VT ✓
	137.131 - 135.293	0.006	0.191	0.000	0.038	0.000	0.198 ✓	1.333	H1-3+VT ✓
	135.293 - 133.454	0.006	0.235	0.000	0.038	0.000	0.242 ✓	1.333	H1-3+VT ✓
	133.454 - 131.616	0.006	0.277	0.000	0.038	0.000	0.284 ✓	1.333	H1-3+VT ✓
	131.616 - 129.777	0.009	0.319	0.000	0.048	0.000	0.328 ✓	1.333	H1-3+VT ✓
	129.777 - 127.939	0.009	0.369	0.000	0.048	0.000	0.378 ✓	1.333	H1-3+VT ✓
	127.939 - 126.101	0.009	0.417	0.000	0.048	0.000	0.426 ✓	1.333	H1-3+VT ✓
	126.101 - 124.262	0.009	0.462	0.000	0.048	0.000	0.472 ✓	1.333	H1-3+VT ✓
	124.262 - 122.424	0.009	0.506	0.000	0.048	0.000	0.515 ✓	1.333	H1-3+VT ✓
	122.424 - 120.585	0.009	0.547	0.000	0.048	0.000	0.557 ✓	1.333	H1-3+VT ✓
	120.585 - 118.747	0.009	0.587	0.000	0.048	0.000	0.597 ✓	1.333	H1-3+VT ✓
	118.747 - 116.908	0.012	0.627	0.000	0.067	0.000	0.639 ✓	1.333	H1-3+VT ✓
	116.908 - 115.07	0.012	0.685	0.000	0.067	0.000	0.698 ✓	1.333	H1-3+VT ✓
	115.07 - 111.18	0.005	0.353	0.000	0.030	0.000	0.359 ✓	1.333	H1-3+VT ✓
L2	115.07 - 111.18	0.005	0.348	0.000	0.028	0.000	0.353 ✓	1.333	H1-3+VT ✓
	111.18 - 109.529	0.009	0.658	0.000	0.051	0.000	0.668 ✓	1.333	H1-3+VT ✓
	109.529 - 107.879	0.010	0.692	0.000	0.050	0.000	0.702 ✓	1.333	H1-3+VT ✓
	107.879 - 106.228	0.010	0.725	0.000	0.050	0.000	0.735 ✓	1.333	H1-3+VT ✓
	106.228 - 104.578	0.010	0.757	0.000	0.050	0.000	0.767 ✓	1.333	H1-3+VT ✓
	104.578 - 102.927	0.010	0.787	0.000	0.050	0.000	0.798 ✓	1.333	H1-3+VT ✓
	102.927 - 101.276	0.010	0.817	0.000	0.050	0.000	0.827 ✓	1.333	H1-3+VT ✓
	101.276 - 99.6257	0.010	0.845	0.000	0.050	0.000	0.856 ✓	1.333	H1-3+VT ✓
	99.6257 - 97.9751	0.010	0.872	0.000	0.050	0.000	0.883 ✓	1.333	H1-3+VT ✓
	97.9751 - 96.3245	0.010	0.899	0.000	0.050	0.000	0.910 ✓	1.333	H1-3+VT ✓
	96.3245 - 94.6739	0.010	0.924	0.000	0.050	0.000	0.935 ✓	1.333	H1-3+VT ✓
	94.6739 - 93.0233	0.010	0.949	0.000	0.050	0.000	0.960 ✓	1.333	H1-3+VT ✓
	93.0233 - 91.3727	0.011	0.973	0.000	0.050	0.000	0.984 ✓	1.333	H1-3+VT ✓
	91.3727 - 89.7221	0.011	0.996	0.000	0.050	0.000	1.007 ✓	1.333	H1-3+VT ✓
	89.7221 - 88.0714	0.011	1.018	0.000	0.050	0.000	1.029 ✓	1.333	H1-3+VT ✓
	88.0714 - 86.4208	0.011	1.040	0.000	0.050	0.000	1.051 ✓	1.333	H1-3+VT ✓

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	<b>Project</b>	E- Prospect, CT02694-B	<b>Date</b>	12:37:06 11/20/03
	<b>Client</b>	SBA Network Services, Inc.	<b>Designed by</b>	KK

Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		P	$f_{bx}$	$f_{by}$	$f_v$	$f_{vt}$			
		$P_u$	$F_{bx}$	$F_{by}$	$F_v$	$F_{vt}$			
L3	86.4208 - 84.7702	0.011	1.060	0.000	0.050	0.000	1.072 ✓	1.333	H1-3+VT ✓
	84.7702 - 83.1196	0.011	1.081	0.000	0.049	0.000	1.092 ✓	1.333	H1-3+VT ✓
	83.1196 - 81.469	0.011	1.100	0.000	0.049	0.000	1.112 ✓	1.333	H1-3+VT ✓
	81.469 - 76.8	0.005	0.527	0.000	0.023	0.000	0.533 ✓	1.333	H1-3+VT ✓
	81.469 - 76.8	0.005	0.519	0.000	0.022	0.000	0.524 ✓	1.333	H1-3+VT ✓
	76.8 - 75.1599	0.010	0.971	0.000	0.040	0.000	0.981 ✓	1.333	H1-3+VT ✓
	75.1599 - 73.5198	0.010	0.985	0.000	0.040	0.000	0.995 ✓	1.333	H1-3+VT ✓
	73.5198 - 71.8797	0.010	0.998	0.000	0.040	0.000	1.009 ✓	1.333	H1-3+VT ✓
	71.8797 - 70.2396	0.010	1.011	0.000	0.040	0.000	1.022 ✓	1.333	H1-3+VT ✓
	70.2396 - 68.5994	0.010	1.024	0.000	0.040	0.000	1.035 ✓	1.333	H1-3+VT ✓
	68.5994 - 66.9593	0.010	1.036	0.000	0.040	0.000	1.047 ✓	1.333	H1-3+VT ✓
	66.9593 - 65.3192	0.010	1.048	0.000	0.040	0.000	1.059 ✓	1.333	H1-3+VT ✓
	65.3192 - 63.6791	0.011	1.060	0.000	0.040	0.000	1.071 ✓	1.333	H1-3+VT ✓
	63.6791 - 62.039	0.011	1.071	0.000	0.040	0.000	1.082 ✓	1.333	H1-3+VT ✓
	62.039 - 60.3989	0.011	1.082	0.000	0.040	0.000	1.093 ✓	1.333	H1-3+VT ✓
	60.3989 - 58.7588	0.011	1.092	0.000	0.040	0.000	1.104 ✓	1.333	H1-3+VT ✓
	58.7588 - 57.1187	0.011	1.102	0.000	0.040	0.000	1.114 ✓	1.333	H1-3+VT ✓
	57.1187 - 55.4786	0.011	1.112	0.000	0.040	0.000	1.124 ✓	1.333	H1-3+VT ✓
	55.4786 - 53.8384	0.011	1.122	0.000	0.040	0.000	1.134 ✓	1.333	H1-3+VT ✓
	53.8384 - 52.1983	0.011	1.131	0.000	0.039	0.000	1.143 ✓	1.333	H1-3+VT ✓
	52.1983 - 50.5582	0.011	1.140	0.000	0.039	0.000	1.152 ✓	1.333	H1-3+VT ✓
	50.5582 - 48.9181	0.011	1.149	0.000	0.039	0.000	1.161 ✓	1.333	H1-3+VT ✓
	48.9181 - 47.278	0.012	1.158	0.000	0.039	0.000	1.170 ✓	1.333	H1-3+VT ✓
	47.278 - 41.844	0.006	0.554	0.000	0.019	0.000	0.560 ✓	1.333	H1-3+VT ✓
	41.844 - 39.6417	0.006	0.545	0.000	0.018	0.000	0.550 ✓	1.333	H1-3+VT ✓
	39.6417 - 37.4394	0.011	1.031	0.000	0.033	0.000	1.042 ✓	1.333	H1-3+VT ✓
	37.4394 - 35.2371	0.011	1.039	0.000	0.033	0.000	1.050 ✓	1.333	H1-3+VT ✓
	35.2371 - 33.0347	0.011	1.046	0.000	0.033	0.000	1.057 ✓	1.333	H1-3+VT ✓
33.0347 - 30.8324	0.011	1.053	0.000	0.033	0.000	1.064 ✓	1.333	H1-3+VT ✓	
30.8324 - 28.6301	0.011	1.059	0.000	0.033	0.000	1.071 ✓	1.333	H1-3+VT ✓	
		0.011	1.066	0.000	0.033	0.000	1.077 ✓	1.333	H1-3+VT ✓



<b>ERITower</b>  <b>Sterling Engineering</b> 7171, Highway 6 North, Ste 130 Houston, TX 77095 Phone: (281) 583.7088 FAX: (281) 583 5495	<b>Job</b>	150-Ft Monopole Tower	<b>Page</b>	17 of 17
	<b>Project</b>	E- Prospect, CT02694-B	<b>Date</b>	12:37:06 11/20/03
	<b>Client</b>	SBA Network Services, Inc.	<b>Designed by</b>	KK

Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$P$	$f_{bx}$	$f_{by}$	$f_v$	$f_{vt}$			
	28.6301 - 26.4278	0.011	1.072	0.000	0.033	0.000	1.084 ✓	1.333	H1-3+VT ✓
	26.4278 - 24.2255	0.012	1.078	0.000	0.033	0.000	1.089 ✓	1.333	H1-3+VT ✓
	24.2255 - 22.0232	0.012	1.083	0.000	0.032	0.000	1.095 ✓	1.333	H1-3+VT ✓
	22.0232 - 19.8208	0.012	1.088	0.000	0.032	0.000	1.100 ✓	1.333	H1-3+VT ✓
	19.8208 - 17.6185	0.012	1.093	0.000	0.032	0.000	1.106 ✓	1.333	H1-3+VT ✓
	17.6185 - 15.4162	0.012	1.098	0.000	0.032	0.000	1.111 ✓	1.333	H1-3+VT ✓
	15.4162 - 13.2139	0.012	1.103	0.000	0.032	0.000	1.115 ✓	1.333	H1-3+VT ✓
	13.2139 - 11.0116	0.012	1.107	0.000	0.032	0.000	1.120 ✓	1.333	H1-3+VT ✓
	11.0116 - 8.80926	0.012	1.112	0.000	0.032	0.000	1.124 ✓	1.333	H1-3+VT ✓
	8.80926 - 6.60695	0.013	1.116	0.000	0.032	0.000	1.128 ✓	1.333	H1-3+VT ✓
	6.60695 - 4.40463	0.013	1.120	0.000	0.032	0.000	1.133 ✓	1.333	H1-3+VT ✓
	4.40463 - 2.20232	0.013	1.123	0.000	0.032	0.000	1.136 ✓	1.333	H1-3+VT ✓
	2.20232 - 0	0.013	1.127	0.000	0.032	0.000	1.140 ✓	1.333	H1-3+VT ✓

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P <sub>allow</sub> lb	% Capacity	Pass Fail
L1	150 - 111.18	Pole	TP27.116x19.5x0.1875	1	-7075.15	809522.87	52.3	Pass
L2	111.18 - 76.8	Pole	TP33.3629x25.9778x0.25	2	-11139.10	1328795.66	83.4	Pass
L3	76.8 - 41.844	Pole	TP39.4834x31.9619x0.3125	3	-17068.60	1966641.47	87.8	Pass
L4	41.844 - 0	Pole	TP47x37.8269x0.375	4	-28044.70	2885038.44	85.5	Pass
Summary								
Pole (L3)							87.8	Pass
<b>RATING =</b>							<b>87.8</b>	<b>Pass</b>