

December 3, 2003

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

**Re: Notice of Exempt Modification
SpectraSite Communications, Inc.
159 Weingart Road, Harwinton
(Docket No. 138)**



Dear Mr. Phelps:

SNET Cellular, Inc. ("SNET") holds the Siting Council Certificate for the existing telecommunications tower and related facility ("Facility") at 159 Weingart Road in Harwinton, Connecticut (Docket No. 138). The tower is managed by SpectraSite Communications, Inc. ("SpectraSite") who is authorized to file this notification, as evidenced by the Power of Attorney dated August 31, 2001 attached hereto as Exhibit A. SpectraSite intends to allow Cellco Partnership d/b/a Verizon Wireless ("Verizon") to install twelve panel antennas and related equipment at the existing Facility in Harwinton. Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the First Selectwoman of Harwinton, Marie M. Knudsen.

The existing Harwinton Facility consists of a 180-foot self-supporting monopole, supplemented by an approved three-foot "top hat" on which Cingular's antennas are currently located. The Facility was approved by the Council as part of Docket No. 138 and modified with approvals by the Council. The tower currently supports the antennas of Cingular Wireless at a centerline elevation of 182 feet AGL, and has an overall height of 185 feet AGL (to the top of the highest antenna).

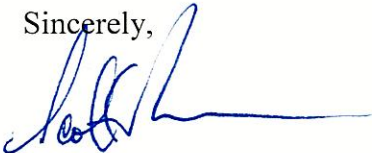
Verizon plans to install twelve panel antennas mounted on the tower at a centerline elevation of 170 feet. See the Tower Elevation attached hereto as part of Exhibit B. Verizon will install a 12' x 30' equipment shelter within the existing compound area near the base of the tower. See the Master Site Plan attached hereto at Exhibit C. The existing tower will be structurally capable of supporting Verizon's proposed use after reinforcement of the tower, as indicated in the structural analysis dated October 16, 2003, attached hereto as Exhibit B. The tower reinforcement detailed in the attached diagram will be completed prior to the co-location proposed.

The planned modifications to the Harwinton Facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

- 1 . The proposed modification will not increase the height of the tower. Verizon's antennas will be installed at the 170-foot level. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.
- 2 . The installation of the Verizon equipment in the existing compound, as reflected on the attached site plan, will not require an extension of the site boundaries. Verizon's proposed equipment will be located entirely within the existing compound area.
- 3 . The proposed modification to the Facility will not increase the noise levels at the existing facility by six decibels or more.
- 4 . The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to an RF Exposure Analysis prepared by Lawrence Behr Associates dated November 6, 2003, Verizon's operations would add .6603% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 1.4793% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit D.

For the foregoing reasons, SpectraSite respectfully submits that the proposed addition of antennas and equipment at the Harwinton facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Scott T. Penner

cc: Marie M. Knudsen, First Selectman of Harwinton
Brian Cosentino, SpectraSite Communications, Inc.
David Trace, SpectraSite Communications, Inc.
Kenneth Baldwin, Esq., Robinson & Cole

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each of the undersigned, SBC TOWER HOLDINGS LLC, a Delaware limited liability company and SBC General Towerco of Texas, LLC, a Delaware limited liability company (collectively, "SBC"), for itself and on behalf of, and in its capacity as manager or general partner of, its subsidiary tower companies (which subsidiary tower companies are listed on **Exhibit A** attached hereto and made a part hereof (SBC and such subsidiary companies, collectively, the "Sublessor Entities")), hereby constitutes and appoints each of SOUTHERN TOWERS, INC. and SPECTRASITE COMMUNICATIONS INC. (in each case, "SpectraSite"), a Delaware corporation, and each of the officers of SpectraSite and such other persons as shall be designated in writing by SpectraSite, as the Sublessor Entities' true and lawful attorney-in-fact, with power of substitution and in the name and on behalf of any and all of the Sublessor Entities, to appear before, communicate with, submit applications and petitions to, enter into agreements and settlements with, accept and comply with the conditions of approvals of, appeal the decisions of, and otherwise deal with all local, municipal, county, state, district and other governmental departments, commissions, offices, agencies, authorities, boards and other bodies (including, without limitation, zoning boards, town and city councils, planning commissions, buildings departments, legislative bodies, and the offices of executive and legislative officers and officials, but expressly excluding the United States Federal Aviation Administration and the United States Federal Communications Commission) in connection with the construction, alteration, expansion, replacement, modification and operation of, and the installation of equipment on and the leasing or licensing of all or any portion of, the telecommunication towers and related equipment and improvements located on the sites identified on **Exhibit B** attached hereto and made a part hereof.

The undersigned hereby grants to such attorneys-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that any such attorney-in-fact, or its, his or her substitute, shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted.

SBC hereby represents that it has the power and authority to execute and deliver this Power of Attorney on behalf of the Sublessor Entities.

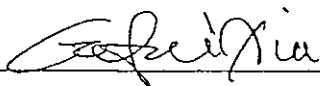
IN WITNESS WHEREOF, the undersigned has executed this Power of Attorney as of this 31st day of August 2001.

SBC TOWER HOLDINGS LLC

By: 

Gefei Xia
Vice President

SBC GENERAL TOWERCO OF TEXAS, LLC

By: 

Gefei Xia
Vice President

STATE OF NEW YORK)
) ss.
COUNTY OF NEW YORK)

On the 31st day of August in the year 2001 before me, the undersigned, a Notary Public in and for said state, personally appeared Gefei Xia, personally known, to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her capacity, and that by her signature on the instrument, the entities upon behalf of which the individual acted, executed the instruments.



Notary Public

My Commission Expires:

LORRAINE MICHELS
Notary Public, State of New York
No. 52-4830738
Qualified in Suffolk County
Commission Expires 2-28-02

EXHIBIT A

List all current and future Sublessors
under the Lease and Sublease

[Attached]

TowerGo
Abilene SMSA Tower Holdings LLC
Amarillo SMSA Tower Holdings LLC
Champaign Tower Holdings LLC
Cincinnati SMSA Tower Holdings LLC
Dallas SMSA Tower Holdings LLC
Detroit SMSA Tower Holdings LLC
Eastern Missouri Cellular Tower Holdings LLC
Gary Cellular Tower Holdings LLC
Kansas City SMSA Tower Holdings LLC
Lubbock SMSA Tower Holdings LLC
Madison SMSA Tower Holdings LLC
McAllen-Edinburg-Mission Tower Holdings LLC
Midland/Odessa SMSA Tower Holdings LLC
Milwaukee SMSA Tower Holdings LLC
Missouri RSA 11/12 Tower Holdings LLC
Missouri RSA 8 Tower Holdings LLC
Missouri RSA 9B1 Tower Holdings LLC
Oklahoma City SMSA Tower Holdings LLC
Oklahoma RSA 3 Tower Holdings LLC
Oklahoma RSA 9 Tower Holdings LLC
Pinnacle Tower Holdings LLC
SBC Tower Holdings LLC
Springwich Cellular Tower Holdings LLC
St. Joseph SMSA Tower Holdings LLC
Texas RSA 10B1 Tower Holdings LLC
Texas RSA 18 Tower Holdings LLC
Texas RSA 19 Tower Holdings LLC
Texas RSA 20B1 Tower Holdings LLC
Texas RSA 6 Tower Holdings LLC
Texas RSA 7B1 Tower Holdings LLC
Texas RSA 9B1 Tower Holdings LLC
Texas RSA 9B4 Tower Holdings LLC
Topeka SMSA Tower Holdings LLC
Washington/Baltimore Cellular Tower Holdings LLC
Wichita SMSA Tower Holdings LLC
Worcester Tower Holdings LLC

EXHIBIT B

Sites

[Attached]

330	CA-1447	Bay Area	Los Gatos Ck.	SF-897-02
331	CA-1448	Bay Area	Burns Creek	SF-899-02
3845	Ca-1450	Sacramento	Visalia SE	CV-556-04
3841	Ca-1451	Sacramento	Hwy 180/Minkler	CV-577-02
3836	Ca-1453	Sacramento	Empire/Hwy 132	SA-233-03
3840	Ca-1454	Sacramento	Hwy 12/Tyler	SA-247-01
150	CA-1455	Sacramento	3221 N Ashley Road	PL-563
3837	CA-1472	Sacramento	Farmington & Gills Rd	SA-254
3842	CA-1473	Sacramento	Keyes & Geer Rd.	SA-252
3843	CA-1474	Bay Area	Napa Rd/8th St	SA-907
1492	CA-1494	LA	Beacon Station	LV-062-05
1489	CA-1513	LA	Halloran Springs	LV-059-01
823	CT-0009	Conn	EHFR - PRESTIGE PARK	2
824	CT-0010	Conn	SOUTH WINDSOR	3
825	CT-0011	Conn	STTN - SOUTHTON	4
826	CT-0012	Conn	WTBR - WATERBURY	5
827	CT-0013	Conn	LIME ROCK	7
828	CT-0014	Conn	KENT	8
829	CT-0015	Conn	RKHL - ROCKY HILL	9
830	CT-0016	Conn	WOODBIDGE	10
831	CT-0017	Conn	HRFR - SOUTH	11
832	CT-0018	Conn	NORTH HAVEN	12
833	CT-0019	Conn	BRLN - BERLIN	14
834	CT-0020	Conn	BNFD - BRANFORD	15
835	CT-0021	Conn	MDFD - MIDDLEFIELD	16
836	CT-0022	Conn	GLFD - GUILFORD	17
837	CT-0023	Conn	OLD SAYBROOK	19
838	CT-0024	Conn	CNTN - CANTON	20
839	CT-0025	Conn	ENFD - ENFIELD	21
840	CT-0026	Conn	EAST LYME	22
841	CT-0027	Conn	WATERFORD	23
842	CT-0028	Conn	WINDSOR	26
3375	CT-0029	Conn	NRWC - NORWICH	28
843	CT-0030	Conn	HDDM - HADDAM	31
844	CT-0031	Conn	TOLLAND	37
849	CT-0032	Conn	CLCH - COLCHESTER	46
850	CT-0033	Conn	POMFRET	50
851	CT-0034	Conn	PLAINFIELD	51
852	CT-0035	Conn	SGTN - STONINGTON	54
853	CT-0036	Conn	BRST - BRISTOL	55
854	CT-0037	Conn	PLYMOUTH	56
855	CT-0038	Conn	HARWINTON	57
856	CT-0039	Conn	LISBON	58
857	CT-0040	Conn	UNIONVILLE	61
859	CT-0041	Conn	WSHN - WEST HAVEN	64

860	CT-0042	Conn	WINCHESTER	71
861	CT-0043	Conn	WTFD - CO	74
862	CT-0044	Conn	WHFR - WEST HARTFORD	76
863	CT-0045	Conn	MDTW - MIDDLETOWN BARN(tel pole)	81
864	CT-0046	Conn	WINDSOR LOCKS CO	96
865	CT-0047	Conn	WSPT - SOUTH	103
866	CT-0048	Conn	BRPT - BRIDGEPORT NORTH	106
3847	CT-0049	Conn	WSPT - WESTPORT	107
867	CT-0050	Conn	NRWL - WEST	108
868	CT-0051	Conn	SMFR - NORTH	109
869	CT-0052	Conn	MLFD - MILFORD	111
870	CT-0053	Conn	RIDGEFIELD	123
3376	CT-0054	Conn	NEWTOWN	125
871	CT-0055	Conn	SOUTHBURY	126
872	CT-0056	Conn	GNWC - NORTH	130
873	CT-0057	Conn	MONROE	144
874	CT-0058	Conn	REDDING	152
875	CT-0059	Conn	NEW MILFORD	155
876	CT-0060	Conn	BEACON FALLS	161
877	CT-0061	Conn	BETHANY	162
878	CT-0062	Conn	NAUGATUCK	166
2994	DC-0001	Wash-Balt	Benning Road	125
1870	DE-0011	Phila	FRANKFORD, DE	5069
1976	DE-0013	Phila	IRON HILL	5004
1978	DE-0014	Phila	PINETREE	5006
1981	DE-0015	Phila	CHRISTIANA	5011
1983	DE-0016	Phila	ELSMERE	5015
1984	DE-0017	Phila	ST. GEORGE	5016
3728	DE-0018	Phila	BEAR	5018
1987	DE-0019	Phila	CLAYMONT	5022
3730	DE-0020	Phila	DUROSS HEIGHTS, DE	5024
1988	DE-0021	Phila	KIRKWOOD	5025
1989	DE-0022	Phila	BROOKSIDE	5026
1990	DE-0023	Phila	WILMINGTON II	5029
1991	DE-0024	Phila	NEWARK	5031
3731	DE-0025	Phila	SMYRNA	5056
1994	DE-0026	Phila	LAUREL	5057
1995	DE-0027	Phila	HARRINGTON	5061
1996	DE-0028	Phila	REHOBOTH	5062
1997	DE-0029	Phila	ELLENDALE	5063
1998	DE-0030	Phila	MILLSBORO	5064
1999	DE-0031	Phila	MILTON, DE	5065
2000	DE-0032	Phila	SEAFORD	5066

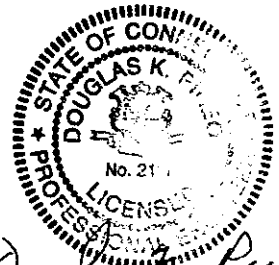
Structural Analysis Summary	
Tower Site	CT-0038 Harwinton
Address	163 Weingart Road Harwinton, CT 06791
Tower Height & Type	180 ft Monopole
Building Code	ANSI/TIA/EIA-222-F (1996) 80 mph (Litchfield County) w/ 1/2" radial ice

Tower Information	
Tower Geometry	Smith Cullum Steel Data Report Number CT-0038, dated 02/13/2002
Foundation	SNET Job Number 3C237, dated 04/24/1990
Geotechnical	Johnson Soils Engineering Project Number 14974-H, dated 01/28/2002

Results Summary*	
Tower Structure	<i>Inadequate; See Conclusions</i>
Flange Bolts	<i>Inadequate; See Conclusions</i>
Flange Plate	<i>Adequate</i>
Anchor Bolts	<i>Inadequate; See Conclusions</i>
Base Plate	<i>Adequate</i>
Foundation	<i>Adequate</i>

* See following pages for detailed analysis results.

Analysis prepared by:
Ashley A. Miller, E.I.
Engineering Associate
Contact (919) 466-5527
with any questions.



Douglas K. Pineo
10/20/03

Douglas K. Pineo, P.E.
Senior Design Engineer

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Connecticut.

1.0 Introduction

A structural analysis was performed on the above noted tower for the addition of proposed antennas as listed. The analysis consisted of applying the forces caused by the existing and proposed loads, and determining the resulting stresses in the structure and its foundation.

1.1 Existing and Proposed Antennas

ELEVATION (Ft A.G.L.)	ANTENNA	CARRIER	COAX	I/O*	NOTES
182	(11) CSS DUO1417-8670 on Platform w/ Handrails	Cingular	(11) 7/8"	I	Existing
182	(1) 3' Omni on Platform w/ Handrails	TBD	(1) 1-1/4"	I	Existing
170	(12) Decibel DB950G85E-M on Low Profile Platform	Cellco	(12) 1-5/8"	I**	Proposed

* I/O denotes coax installed inside or outside of monopole respectively.

** New ports will be required at 167' to install coax inside monopole.

2.0 Detailed Analysis Results

2.1 Monopole Member Stress Levels

ELEVATION (Ft A.G.L.)	STRESS RATIO*
126.3 to 182	1.50**
Flange Bolts	1.20**
Flange Plate	0.85
86.6 to 126.3	1.42**
44.1 to 86.6	1.27**
0 to 44.1	1.13**
Anchor Bolts	1.10**
Base Plate	0.53

* Maximum Stress Ratio: 1.00=Full Allowable

** Overstressed; reinforcing required.

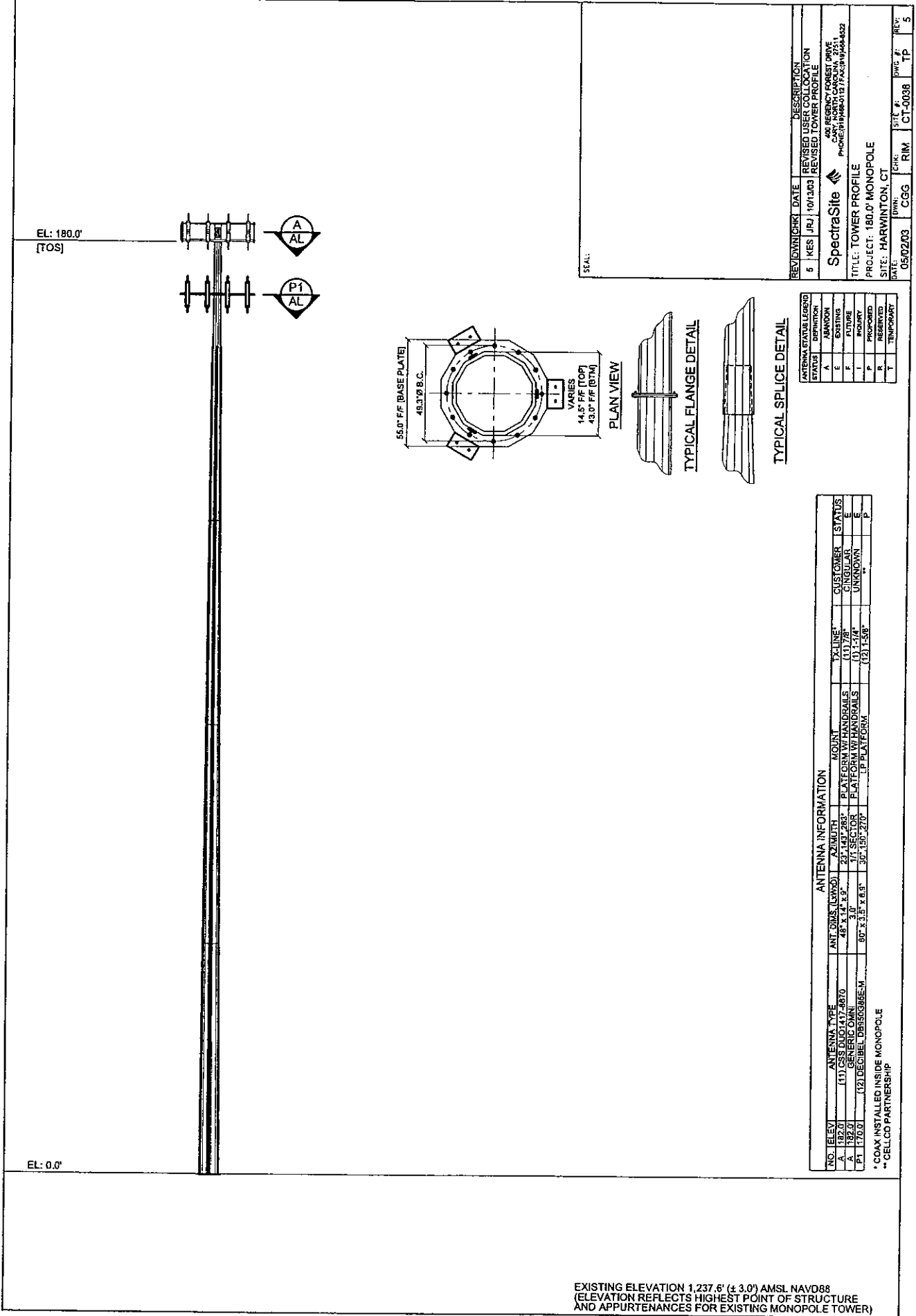
2.2 Foundation Reactions

BASE REACTIONS	REACTIONS	RESULTS*
Moment (<i>kip-ft</i>)	2605.0	<i>Adequate</i>
Compression (<i>kips</i>)	21.0	<i>Adequate</i>
Shear (<i>kips</i>)	22.0	<i>Adequate</i>

* Based on foundation analysis.

3.0 Conclusions and Recommendations

1. The base plate, flange plate and foundation are structurally adequate to accommodate the existing and proposed antenna and transmission line loading used in this analysis.
2. The monopole, anchor bolts and flange bolts are not structurally adequate to accommodate the existing and proposed antenna and transmission lines loading used in this analysis.
3. The monopole, anchor bolts and flange bolts are structurally adequate to accommodate the existing and proposed antenna and transmission lines loading used in this analysis after being reinforced as per the attached drawing CT-0038-M1.
4. Any future changes in loading must be reviewed by the SpectraSite Engineering Department.



REVISION	CHK	DATE	DESCRIPTION
5	KES	10/13/03	REVISED USER COLLOCATION REVISED TOWER PROFILE

SpectraSite	400 REGENCY FOREST DRIVE HARWINTON, CT 06431 PHONE: (860) 317-7400 FAX: (860) 317-7402
TITLE: TOWER PROFILE	
PROJECT: 180.0' MONOPOLE	
SITE: HARWINTON, CT	
DATE: 05/02/03	CHK: CGG
DWG #:	CT-0038
REV:	5

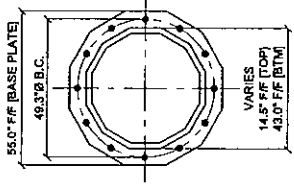
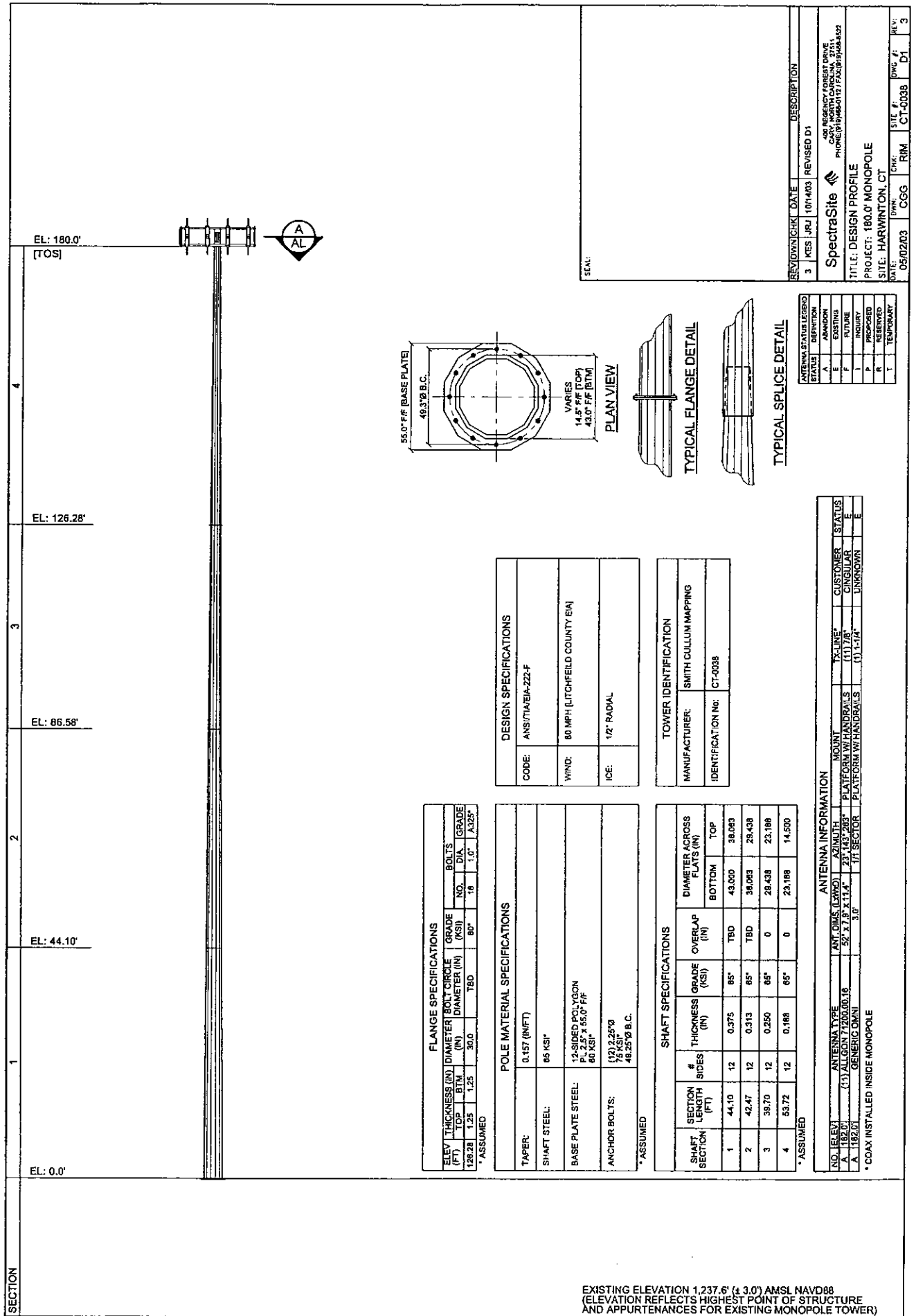
ANTENNA STATUS	LEGEND
A	ABANDON
E	EXISTING
F	FUTURE
I	INQUIRY
P	PROPOSED
R	RESERVED
T	TEMPORARY

ANTENNA INFORMATION					
NO.	ELEV	ANT. TYPE	ANT. DIMS (LxWxH)	SECTOR	HEIGHT
A	182.0'	(1) GSS DUC1417-2870	48" x 14" x 6"	21° 14' 28"	21' 14" 28"
A	182.0'	GENERIC OMNI	3.0'	360°	3.0'
P1	176.0'	(12) DECIBEL DBS503RE-M	80" x 2.5" x 6.5"	30° 130° 270°	30' 130' 270'
* COAX INSTALLED INSIDE MONOPOLE					
** CELCO PARTNERSHIP					

STATUS	CUSTOMER	STATUS
A	CELLCO	ABANDON
E	CELLCO	EXISTING
F	CELLCO	FUTURE
I	CELLCO	INQUIRY
P	CELLCO	PROPOSED
R	CELLCO	RESERVED
T	CELLCO	TEMPORARY

EXISTING ELEVATION 1,237.6' (± 3.0') AMSL NAVD88
(ELEVATION REFLECTS HIGHEST POINT OF STRUCTURE
AND APPURTENANCES FOR EXISTING MONOPOLE TOWER)

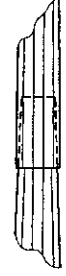
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PLAN VIEW



TYPICAL FLANGE DETAIL



TYPICAL SPICE DETAIL

DESIGN SPECIFICATIONS	
CODE:	ANSI/AIA-222-F
WIND:	80 MPH (TORFIELD COUNTY EIA)
ICE:	1/2" RADIAL

TOWER IDENTIFICATION	
MANUFACTURER:	SMITH CULLUM MAPPING
IDENTIFICATION No:	CT-0038

FLANGE SPECIFICATIONS				
FLY	THICKNESS (IN)	DIAMETER (IN)	GRADE (KSI)	BOLTS
TOP	BTM	DIA.	NO.	DIA.
1.25	1.25	30.0	80"	10 1.0"
* ASSUMED				

POLE MATERIAL SPECIFICATIONS	
TAPER:	0.157 (IN/FT)
SHAFT STEEL:	65 KSI*
BASE PLATE STEEL:	12-SIDED POLYGON PL 2.5" x 55.0" F.F. 60 KSI*
ANCHOR BOLTS:	{12} 2.25"Ø 75 KSI* 48.25"Ø B.C.

SHAFT SPECIFICATIONS							
SHAFT SECTION	SECTION LENGTH (FT)	# SIDES	THICKNESS (IN)	GRADE (ksi)	OVERLAP (IN)	DIAMETER ACROSS FLATS (IN)	
						BOTTOM	TOP
1	44.10	12	0.375	65*	TBD	43.000	38.063
2	42.47	12	0.313	65*	TBD	36.063	29.438
3	39.70	12	0.250	65*	0	28.438	23.188
4	53.72	12	0.188	65*	0	23.188	14.500
* ASSUMED							

ANTENNA INFORMATION				
NO. (ELEV)	ANTENNA TYPE	ANT. DIMS (LWD)	AZIMUTH	STATUS
1	(1) ALUMINUM MONOPOLE	52' X 7.8' X 11.5'	231.463.283	CINGULAR
A	GENERIC DATA	3.0'	171.504	UNKNOWN

* COAX INSTALLED INSIDE MONOPOLE

EXISTING ELEVATION 1,237.6' (± 3.0') AMSL NAVD88
(ELEVATION REFLECTS HIGHEST POINT OF STRUCTURE AND APPURTENANCES FOR EXISTING MONOPOLE TOWER)

ANTENNA STATUS	LEGEND
A	ABANDON
E	EXISTING
F	FUTURE
I	INQUIRY
P	PROPOSED
R	RESERVED
T	TEMPORARY

REV	DATE	CHK	DATE	DESCRIPTION
3	KES	JRJ	10/14/03	REVISED D1

SpectraSite
1000 N. MAIN ST. SUITE 200
HARTWINTON, CT 06101
PHONE: (860) 417-1171 FAX: (860) 417-1171

TITLE: DESIGN PROFILE
PROJECT: 180.0' MONOPOLE
SITE: HARTWINTON, CT

DATE: 05/02/03
DWG: CT-0038
SITE #:
Dwg #:
REL #:

STANDARD EIA-222F IMPERIAL UNITS

INPUT INFORMATION

Project Name	Hamwinton, CT
Job Number	CT-0038
Title	180' Monopole
Designer	AAM

Basic Wind Speed (mph)	80.00
Radial Ice (in)	0.50
Height (ft)	180.00
Number of Sides	12
Yield Stress (ksi)	65.00
Allowable Stress factor	1.33
Operational Wind (mph)	50.00

Possible Number of Sides
0 - Round
8 - 8 Sided
12 - 12 Sided
16 - 16 Sided
18 - 18 Sided

Individual Appurtenances Table

[illegible]

ANALYSIS SUMMARY

Possible Number of Sides
0 - Round
8 - 8 Sided
12 - 12 Sided
16 - 16 Sided
18 - 18 Sided

Basic Wind Speed (mph)	80.00
Radial Ice (in)	0.50
Height (ft)	180.00
Number of Sides	12
Yield Stress (ksi)	65.00
Allowable Stress factor	1.33
Operational Wind (mph)	50.00

INDIVIDUAL APPURTENANCES ROTATION

Elev.	Description	Tilt Bare (deg)	Tilt Iced (deg)
(ft)			
182.00	DUO1417-8670	14.973	13.152
182.00	Platform w/ Handrails	14.973	13.152
182.00	Omni	14.973	13.152
182.00	Same as above	14.973	13.152
170.00	DB950G85E-M	14.661	12.869
170.00	LP Platform	14.661	12.869

Project Name	Harwinton, CT
Job Number	CT-0038
Title	180' Monopole
Designer	AAM

[illegible]

Project Name	Harwinton, CT
Job Number	CT-0038
Title	180' Monopole
Designer	AAM

Pole Section	Top Elev.	Bott. Elev.	Mid-section Height	Section Length	Avg. O.D.	Dist. Area Appurtenance	Total Wind Area	r Ratio	Kz	qz	C	Force Coeff.	Horz. Force	Shear	Moment
	(ft)	(ft)	(ft)	(ft)	(in)	(ft²/ft)	(ft²)		(ft)	(lb/ft²)	(mph ft)	Cf	(kip)	(kip)	(kip ft)
TOP	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>
A	180.00	170.00	175.00	10.00	15.31	0.00	12.76	0.025	1.61	26.39	130	1.030	0.586	0.00	0.0
B	170.00	160.00	165.00	10.00	16.92	0.00	14.10	0.022	1.58	25.95	142	1.030	0.637	0.59	2.9
C	160.00	150.00	155.00	10.00	18.54	0.00	15.45	0.020	1.56	25.49	154	1.030	0.686	1.22	12.6
D	150.00	140.00	145.00	10.00	20.16	0.00	16.80	0.019	1.53	25.01	166	1.030	0.731	1.91	27.6
E	140.00	130.00	135.00	10.00	21.78	0.00	18.15	0.017	1.50	24.50	178	1.030	0.774	2.64	50.4
F	130.00	126.28	128.14	3.72	22.89	0.00	7.10	0.016	1.47	24.14	185	1.030	0.774	3.41	80.6
G	126.28	126.27	126.27	0.01	23.19	0.00	0.02	0.022	1.47	24.04	187	1.030	0.298	3.71	93.9
H	126.27	120.00	123.13	6.27	23.68	0.00	12.37	0.021	1.46	23.87	191	1.030	0.514	3.71	93.9
I	120.00	110.00	115.00	10.00	24.96	0.00	20.80	0.020	1.43	23.41	199	1.030	0.848	4.23	118.8
J	110.00	100.00	105.00	10.00	26.54	0.00	22.11	0.019	1.39	22.81	209	1.030	0.878	5.07	165.3
K	100.00	90.00	95.00	10.00	28.11	0.00	23.43	0.018	1.35	22.16	218	1.030	0.904	5.95	220.5
L	90.00	86.58	88.29	3.42	29.17	0.00	8.31	0.017	1.32	21.70	224	1.030	0.314	7.17	308.5
M	86.58	86.57	86.57	0.01	29.44	0.00	0.02	0.021	1.32	21.58	225	1.030	0.001	7.17	308.6
N	86.57	80.00	83.28	6.57	29.95	0.00	16.40	0.021	1.30	21.34	228	1.030	0.609	7.78	357.7
O	80.00	70.00	75.00	10.00	31.24	0.00	26.04	0.020	1.26	20.72	234	1.030	0.939	8.72	440.2
P	70.00	60.00	65.00	10.00	32.80	0.00	27.34	0.019	1.21	19.89	241	1.030	0.946	9.67	532.1
Q	60.00	50.00	55.00	10.00	34.36	0.00	28.64	0.018	1.16	18.96	246	1.030	0.945	10.61	633.5
R	50.00	44.11	47.06	5.89	35.60	0.00	17.47	0.018	1.11	18.13	250	1.030	0.552	11.16	697.6
S	44.11	44.10	44.11	0.01	36.06	0.00	0.03	0.021	1.09	17.80	251	1.030	0.001	11.16	697.7
T	44.10	40.00	42.05	4.10	36.39	0.00	12.43	0.021	1.07	17.56	251	1.030	0.380	11.54	744.2
U	40.00	30.00	35.00	10.00	37.49	0.00	31.25	0.020	1.02	16.66	252	1.030	0.906	12.45	864.2
V	30.00	20.00	25.00	10.00	39.07	0.00	32.56	0.019	1.00	16.38	260	1.030	0.928	13.38	993.3
W	20.00	10.00	15.00	10.00	40.64	0.00	33.87	0.018	1.00	16.38	271	1.030	0.966	14.34	1131.9
X	10.00	0.00	5.00	10.00	42.21	0.00	35.18	0.018	1.00	16.38	281	1.030	1.003	15.35	1280.4

Project Name	Harwinton, CT
Job Number	CT-0038
Title	180' Monopole
Designer	AAM

Pole Section	Top Elev.	Bott. Elev.	Mid-section Height	Section Length	Avg. O.D.	Dist. Area Appurtenance	Total Wind Area	r Ratio	Kz	qz	C	Force Coeff.	Horz. Force	Shear	Moment
	(ft)	(ft)	(ft)	(ft)	(in)	(ft²/ft)	(ft²)		(ft)	(lb/ft²)	(mph ft)	Cf	(kip)	(kip)	(kip ft)
TOP															
A	180.00	170.00	175.00	10.00	16.31	0.00	13.59	0.084	1.61	19.79	119	1.030	0.468	0.00	0.0
B	170.00	160.00	165.00	10.00	17.92	0.00	14.94	0.077	1.58	19.46	130	1.030	0.506	0.47	2.3
C	160.00	150.00	155.00	10.00	19.54	0.00	16.28	0.070	1.56	19.12	141	1.030	0.542	0.97	9.6
D	150.00	140.00	145.00	10.00	21.16	0.00	17.63	0.065	1.53	18.76	151	1.030	0.576	1.52	22.0
E	140.00	130.00	135.00	10.00	22.78	0.00	18.98	0.060	1.50	18.38	161	1.030	0.607	2.09	40.0
F	130.00	126.28	128.14	3.72	23.89	0.00	7.41	0.058	1.47	18.11	167	1.030	0.233	2.70	64.0
G	126.28	126.27	126.27	0.01	24.19	0.00	0.02	0.062	1.47	18.03	169	1.030	0.001	2.93	74.5
H	126.27	120.00	123.13	6.27	24.68	0.00	12.89	0.061	1.46	17.90	172	1.030	0.402	3.33	94.1
I	120.00	110.00	115.00	10.00	25.96	0.00	21.63	0.058	1.43	17.55	179	1.030	0.661	4.00	130.8
J	110.00	100.00	105.00	10.00	27.54	0.00	22.95	0.054	1.39	17.10	188	1.030	0.683	4.68	174.2
K	100.00	90.00	95.00	10.00	29.11	0.00	24.26	0.052	1.35	16.62	195	1.030	0.702	5.38	224.5
L	90.00	86.58	88.29	3.42	30.17	0.00	8.60	0.050	1.32	16.28	200	1.030	0.244	5.62	243.3
M	86.58	86.57	86.57	0.01	30.44	0.00	0.03	0.053	1.32	16.19	202	1.030	0.001	5.63	243.4
N	86.57	80.00	83.28	6.57	30.95	0.00	16.94	0.053	1.30	16.01	204	1.030	0.472	6.10	281.9
O	80.00	70.00	75.00	10.00	32.24	0.00	26.87	0.050	1.26	15.54	209	1.030	0.727	6.82	346.5
P	70.00	60.00	65.00	10.00	33.80	0.00	28.17	0.048	1.21	14.91	215	1.030	0.731	7.56	418.4
Q	60.00	50.00	55.00	10.00	35.36	0.00	29.47	0.046	1.16	14.22	220	1.030	0.729	8.28	497.6
R	50.00	44.11	47.06	5.89	36.60	0.00	17.97	0.044	1.11	13.60	222	1.030	0.425	8.71	547.6
S	44.11	44.10	44.11	0.01	37.06	0.00	0.03	0.047	1.09	13.35	223	1.030	0.001	8.71	547.7
T	44.10	40.00	42.05	4.10	37.39	0.00	12.77	0.047	1.07	13.17	223	1.030	0.293	9.00	584.0
U	40.00	30.00	35.00	10.00	38.49	0.00	32.08	0.045	1.02	12.50	224	1.030	0.698	9.70	677.5
V	30.00	20.00	25.00	10.00	40.07	0.00	33.39	0.044	1.00	12.29	231	1.030	0.714	10.42	778.1
W	20.00	10.00	15.00	10.00	41.64	0.00	34.70	0.042	1.00	12.29	240	1.030	0.742	11.16	886.0
X	10.00	0.00	5.00	10.00	43.21	0.00	36.01	0.040	1.00	12.29	249	1.030	0.770	11.93	1001.4

Project Name	Hamwinton, CT
Job Number	CT-0038
Title	180' Monopole
Designer	AAM

Force Calculation						
Elev	Bare		Iced		Horz. Force (kip)	Horz. Force (kip)
	q _z (lb/ft ²)	C _A A _A (ft ²)	q _z (lb/ft ²)	C _A A _A (ft ²)		
182.00	26.69	47.94	26.69	52.43	1.77	1.77
182.00	26.69	40.00	26.69	54.00	1.83	1.83
182.00	26.69	1.18	26.69	1.61	0.05	0.05
182.00	26.69	0.00	26.69	0.00	0.00	0.00
170.00	26.17	33.52	26.17	39.01	1.29	1.29
170.00	26.17	25.00	26.17	33.75	1.12	1.12

Pole Section	Top Elev.	Bott. Elev.	Bare			Iced				
	(ft)	(ft)	Eq. Force (kip)	Eq. Elev. (ft)	Shear (kip)	Moment (kip ft)	Eq. Force (kip)	Eq. Elev. (ft)	Shear (kip)	Moment (kip ft)
TOP	>>>>>>>>>>>>>>>>	>>>>>>>>>>>>>>>>								
A	180.00	170.00	4.019	182.00	4.02	8.0	3.654	182.00	3.65	7.3
B	170.00	160.00			4.02	48.2			3.65	43.9
C	160.00	150.00	2.588	170.00	6.61	114.3		170.00	6.07	104.5
D	150.00	140.00			6.61	180.4	2.414		6.07	165.2
E	140.00	130.00			6.61	246.4			6.07	225.9
F	130.00	126.28			6.61	312.5			6.07	286.6
G	126.28	126.27			6.61	337.1			6.07	309.2
H	126.27	120.00			6.61	337.2			6.07	309.2
I	120.00	110.00			6.61	378.6			6.07	347.3
J	110.00	100.00			6.61	444.7			6.07	407.9
K	100.00	90.00			6.61	510.7			6.07	468.6
L	90.00	86.58			6.61	576.8			6.07	529.3
M	86.58	86.57			6.61	599.4			6.07	550.1
N	86.57	80.00			6.61	599.5			6.07	550.1
O	80.00	70.00			6.61	642.9			6.07	650.7
P	70.00	60.00			6.61	708.9			6.07	711.4
Q	60.00	50.00			6.61	775.0			6.07	772.0
R	50.00	44.11			6.61	841.1			6.07	807.8
S	44.11	44.10			6.61	880.0			6.07	807.8
T	44.10	40.00			6.61	907.1			6.07	832.7
U	40.00	30.00			6.61	973.2			6.07	893.4
V	30.00	20.00			6.61	1039.3			6.07	954.1
W	20.00	10.00			6.61	1105.4			6.07	1014.8
X	10.00	0.00			6.61	1171.4			6.07	1075.4

Project Name	Harwinton, CT
Job Number	CT-0038
Title	180' Monopole
Designer	AAM

Pole Section	Top Elev.	Bott. Elev.	Sec. Length	Avg. Mean Width	Thickness	Avg. Area	Pole Sec. Weight	Bare		Iced					
(ft.)	(ft.)	(ft)	(ft)	(in)	(in)	(in ²)	(kip)	App. Weight	Total Weight	Accum. Weight	Avg. Ice Area	Ice Weight	Pole Sec. Weight	App. Weight	Total Weight
TOP	>>>>>>	>>>>>>	>>>>>>	>>>>>>	>>>>>>	>>>>>>	>>>>>>	2.675	2.68	2.68				3.894	3.89
A	180.00	170.00	10.00	15.12	3/16	9.15	0.311	0.000	0.31	2.99	25.45	0.099	0.311	0.000	0.41
B	170.00	160.00	10.00	16.74	3/16	10.13	0.345	1.638	1.98	4.97	28.05	0.109	0.345	2.368	2.82
C	160.00	150.00	10.00	18.35	3/16	11.11	0.378	0.000	0.38	5.35	30.66	0.119	0.378	0.000	0.50
D	150.00	140.00	10.00	19.97	3/16	12.09	0.411	0.000	0.41	5.76	33.26	0.129	0.411	0.000	0.54
E	140.00	130.00	10.00	21.59	3/16	13.07	0.445	0.000	0.44	6.20	35.86	0.139	0.445	0.000	0.58
F	130.00	126.28	3.72	22.70	3/16	13.74	0.174	0.000	0.17	6.38	37.65	0.054	0.174	0.000	0.23
G	126.28	126.27	0.01	22.94	1/4	18.47	0.001	0.000	0.00	6.38	38.14	0.000	0.001	0.000	0.00
H	126.27	120.00	6.27	23.43	1/4	18.86	0.402	0.000	0.40	6.78	38.93	0.095	0.402	0.000	0.50
I	120.00	110.00	10.00	24.71	1/4	19.89	0.677	0.000	0.68	7.46	40.99	0.159	0.677	0.000	0.84
J	110.00	100.00	10.00	26.29	1/4	21.16	0.720	0.000	0.72	8.18	43.53	0.169	0.720	0.000	0.89
K	100.00	90.00	10.00	27.86	1/4	22.43	0.763	0.000	0.76	8.94	46.06	0.179	0.763	0.000	0.94
L	90.00	86.58	3.42	28.92	1/4	23.28	0.271	0.000	0.27	9.21	47.77	0.064	0.271	0.000	0.33
M	86.58	86.57	0.01	29.12	5/16	29.35	0.001	0.000	0.00	9.21	48.20	0.000	0.001	0.000	0.00
N	86.57	80.00	6.57	29.64	5/16	29.87	0.668	0.000	0.67	9.88	49.03	0.125	0.668	0.000	0.79
O	80.00	70.00	10.00	30.93	5/16	31.17	1.061	0.000	1.06	10.94	51.11	0.199	1.061	0.000	1.26
P	70.00	60.00	10.00	32.49	5/16	33.74	1.114	0.000	1.11	12.06	53.62	0.209	1.114	0.000	1.32
Q	60.00	50.00	10.00	34.05	5/16	34.32	1.168	0.000	1.17	13.22	56.13	0.218	1.168	0.000	1.39
R	50.00	44.11	5.89	35.29	5/16	35.57	0.713	0.000	0.71	13.94	58.13	0.133	0.713	0.000	0.85
S	44.11	44.10	0.01	35.69	3/8	43.09	0.001	0.000	0.00	13.94	58.87	0.000	0.001	0.000	0.00
T	44.10	40.00	4.10	36.01	3/8	43.48	0.607	0.000	0.61	14.54	59.39	0.095	0.607	0.000	0.70
U	40.00	30.00	10.00	37.12	3/8	44.82	1.525	0.000	1.53	16.07	61.17	0.238	1.525	0.000	1.76
V	30.00	20.00	10.00	38.69	3/8	46.72	1.590	0.000	1.59	17.66	63.70	0.248	1.590	0.000	1.84
W	20.00	10.00	10.00	40.27	3/8	48.62	1.654	0.000	1.65	19.31	66.24	0.258	1.654	0.000	1.91

Project Name	Harwinton, CT
Job Number	CT-0038
Title	180' Monopole
Designer	AAM

Pole Section	Top Elev. (ft)	Bott. Elev. (ft)	Section Length (ft)	Moment (kip ft)	Inertia at Top of Sec. (in ⁴)	Inertia at Bot. of Sec. (in ⁴)	Working Stress					Operational	
							Avg. Moment (kip ft)	Inc. Tilt (deg)	Total Tilt (deg)	Tot. Defl. @top (ft)	Total Weight (kip)	Accum. Weight (kip)	M ₂ (kip ft)
TOP	>>>												

Project Name	Hawinton, CT
Job Number	CT-0038
Title	180' Monopole
Designer	AAM

Pole Section	Top Elev. (ft)	Bott. Elev. (ft)	Area (in ²)	S (in ²)	Bare					Iced					Stress: Ratio			
					Dead Load (kip)	Shear (kip)	Moment (kip ft)	M ₂ (kip ft)	M _{total} (kip ft)	I _e (ksi)	I _b (ksi)	I _{total} (ksi)	F _B (ksi)	Stress Ratio		Dead Load (kip)	Shear (kip)	Moment (kip ft)
TOP	>>&																	

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Email: cmartin@ibagroup.com



Lawrence Behr Associates, Inc.

November 6, 2003

Scott Penner, Esq.
Hurwitz & Sagarin, LLC
147 N. Broad Street
Milford, CT 06460

RE: Power density calculations for SpectraSite Site # CT-0038
159 Weingart Road, Harwinton, CT

Dear Mr. Penner:

Lawrence Behr Associates, Inc. (LBA) has been retained by SpectraSite of West Hartford, CT to review radio frequency (RF) power density calculations for the above captioned site. The calculations included an evaluation of all carriers' installations located on the tower and proposed to be located on the tower as provided to us by SpectraSite. The RF power density calculations for the base of tower at ground level for one sector for each carrier have been provided using the techniques and procedures outlined in the FCC Office of Engineering and Technology (OET) Bulletin No. 65.¹ Limits for acceptable RF exposure are also defined in FCC OET Bulletin No. 65. The exposure limits vary with the frequency of the signal. The FCC public exposure standard was established at a level that is far below any amount of exposure that has been determined to have any biological effect on living tissue.

In the calculations, the conservative assumption that the site was operating at full capacity with all channels transmitting was used. It would be extremely unusual for all channels to operate simultaneously since transmissions are based solely on the random demand of individual radio users. As a practical matter, experience with typical installations shows that average hourly usage is intermittent and will vary from zero to 90%, with peak usage occurring at "rush hour" and minimal usage occurring during nighttime hours.

In addition, the power density was calculated assuming the antenna was directed straight down. Generally, antennas are pointing in the direction

¹ FCC OET Bulletin No. 65, Edition 97-01, August 1997, defines the accepted equations and methods used for measuring RF power density.

November 6, 2003

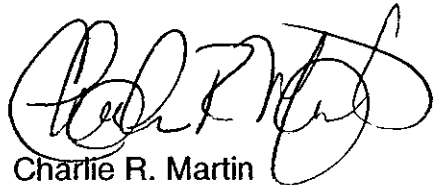
Page 2

of the horizon. This means that during normal operation the actual measured exposure levels are likely to be found to be even smaller than the corresponding calculated values. Furthermore, signal levels inside nearby homes and buildings will be lower than those immediately outside because of the high attenuation of most common building materials at these frequencies.² Hence, signal levels inside nearby homes will not be greater than normal ambient levels found in the area.

Based on the assumptions made for "a worst-case scenario" for the above captioned tower site including existing and proposed antennas the combined MPE level will be **1.4793%** of the general population/uncontrolled standard as defined in FCC Bulletin OET- 65. Details are included in the attached table.

Should you have any questions please contact me at 1 800 522-4464.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Charlie R. Martin", with a large, stylized flourish at the end.

Charlie R. Martin
Vice-President, Site Services

attachment

² Previous measurements made by this firm on signal attenuation inside buildings indicates that typical cellular signals are reduced to less than 1/100 of their free space value.

SpectraSite Site # CT- 0038- Harwinton

[illegible]

*Ground reflection factor of 1.6 fold for all calculations
Distance to target is calculated by taking height above ground minus 6 feet.

100

