STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

December 13, 1999

Peter W. van Wilgen, Director – Real Estate Operations
SNET Wireless, Inc.
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: TS-SCLP-014-991109 - Springwich Cellular Limited Partnership request for an order to approve tower sharing at an existing telecommunications facility located at 21 Acorn Road in Branford, Connecticut.

Dear Mr. van Wilgen:

At a public meeting held December 8, 1999, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures.

This facility has been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequency now used on this tower. 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 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.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated November 9, 1999, and in additional information dated November 17, 1999.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/SLL/sll

cc: Honorable Anthony P. DaRos, First Selectman, Town of Branford
Steve Kotfila, Site Development Manager, Sprint PCS
Ronald C. Clark, Manager – Real Estate, Nextel Communications

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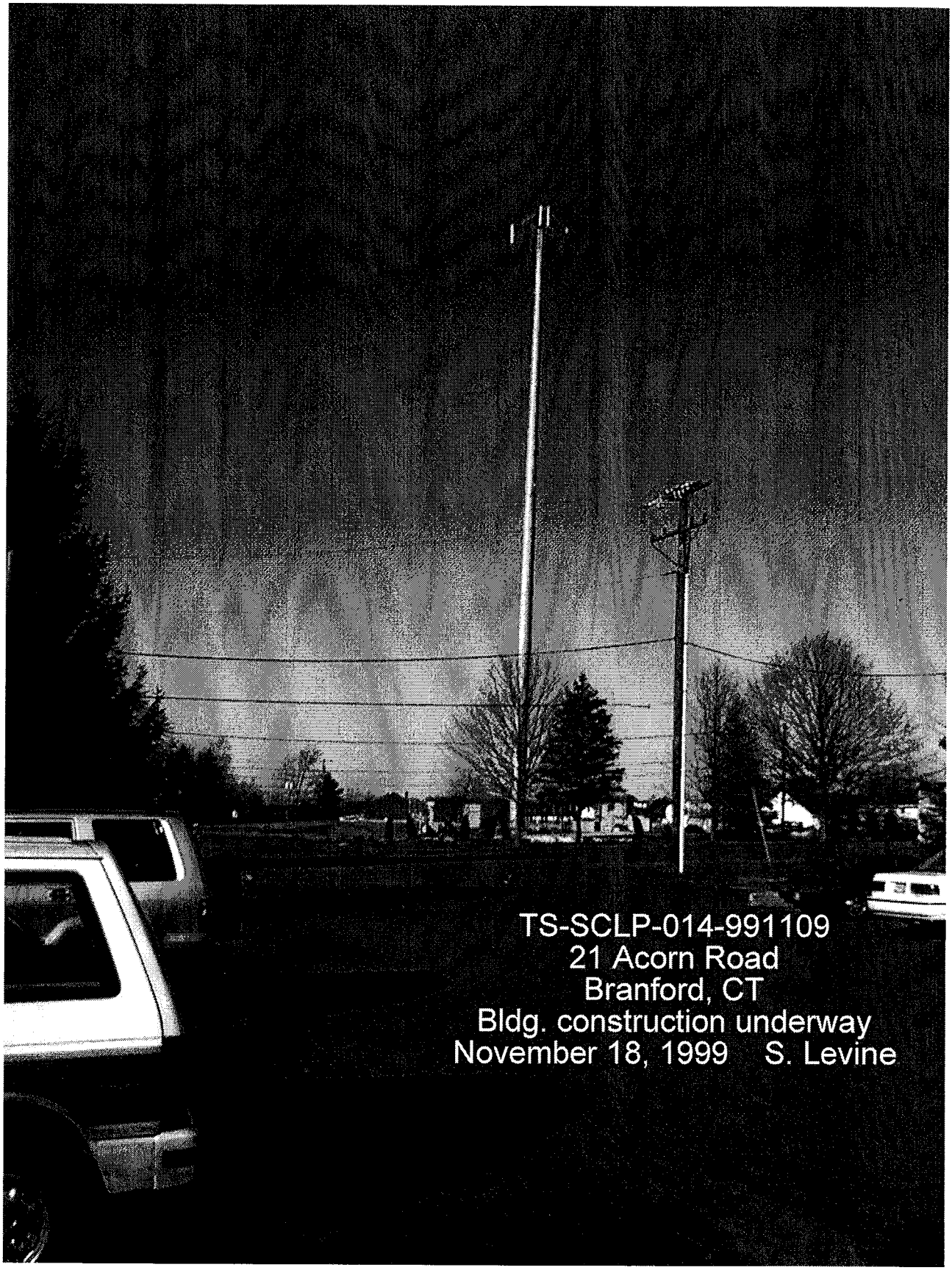

TS-SCLP-014-991109
21 Acorn Road
Branford, CT
Bldg. construction underway
November 18, 1999 S. Levine

SPRING
1999

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

November 17, 1999

Honorable Anthony J. DaRos
First Selectman
Town of Branford
Town Hall
1019 Main Street, P.O. Box 150
Branford, CT 06405

RE: TS-SCLP-014-991109 - Springwich Cellular Limited Partnership request for an order to approve tower sharing at an existing telecommunications facility located at 21 Acorn Road in Branford, Connecticut.

Dear Selectman DaRos:

The Connecticut Siting Council (Council) received this request for tower sharing, pursuant to Connecticut General Statutes § 16-50aa.

The Council will consider this item at the next meeting scheduled for Wednesday, December 8, 1999, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

Very truly yours,

Joel M. Rinebold
Executive Director

JMR/jlh

Enclosure: Notice of Tower Sharing

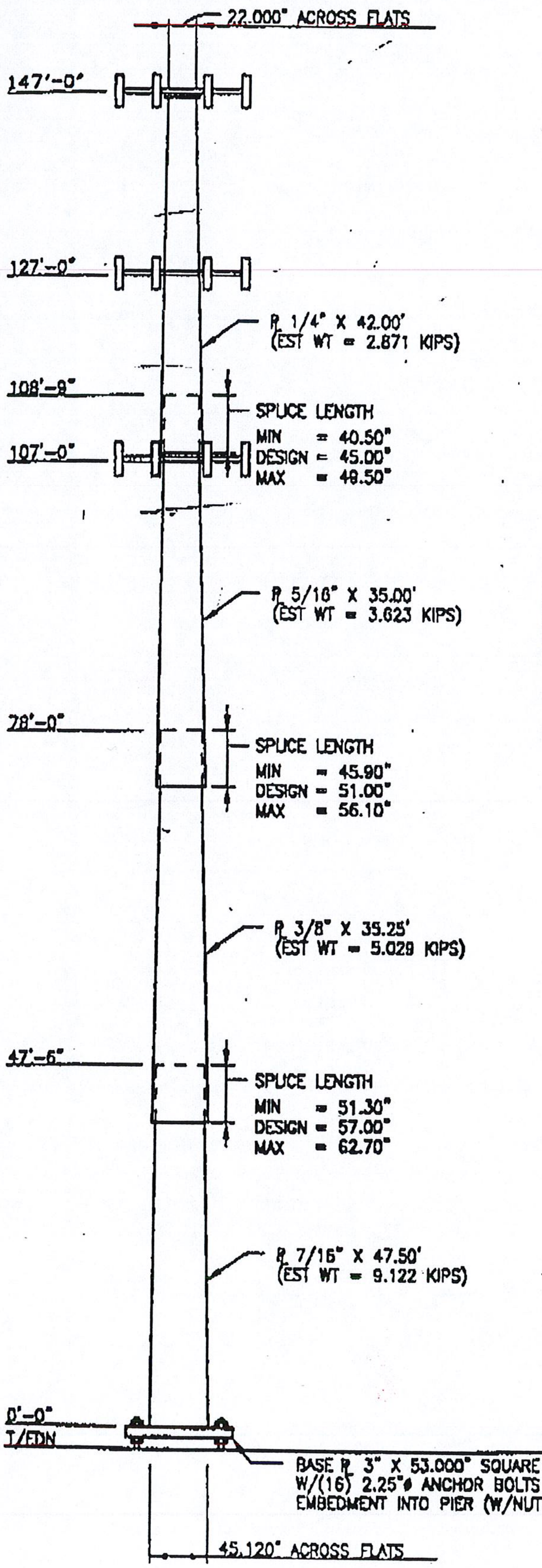
I:\siting\cm\springwich\branford\daros1

FROM SCLP

Salem-East Haddam Rd.	41 28 6.3	72 16 24
Berlin-Kensington Rd.	41 37 34	72 46 34
Rocky Hill-Main St	41 40 05	72 46 34
Branford-Acorn Rd.	41 17 35	72 45 48
Ashford-Ference Rd.	41 57 07	72 11 46
Middletown-Saybrook Rd.	41 30 38	72 35 38

SUMMIT MANUFACTURING INC.
225 KIWANIS BOULEVARD, WEST HAZELTON, PA 18201
PHONE: (717) 454-8730 E-MAIL: SUMMITLG@EPIX.NET
FAX: (717) 454-5946 WEB: HTTP:\\WWW.SUMMITMFGINC.COM

PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street Suite 500 Columbus, Ohio 43215
(614)-221-6679 FAX (614)-221-0166



JOB DATA			
Page 1 of 2		Job No.	29297-566
By	DLS	Design No.	SUMMIT JOB # 2737-97
		Date	09-29-1997
Chk'd By	KJS	Rev. No.	Rev. Date
Pole	150' POLE		
Site	#CT03XC021: BRANFORD, CT: ACORN RD.		
Owner	SPRINT SPECTRUM		
Ref. No.			
Design	90 MPH & 78 MPH W/.5" ICE ACCORDING TO TIA/EIA-222-F 1996		

LOAD CASES		
CASE 1	90 MPH WITH NO ICE	DESIGN WIND
CASE 2	77 MPH WITH 1/2" RADIAL ICE	REDUCED WIND WITH ICE
CASE 3	50 MPH WITH NO ICE	OPERATIONAL WIND

POLE SPECIFICATIONS	
Pole Shape Type:	18-SIDED POLYGON
Taper:	0.170034 IN/FT
Shaft Steel:	ASTM A607 GRADE 60
Base PL Steel:	ASTM A572 GRADE 50 (50 KSI)
Anchor Bolts:	2 1/4"ø x 8'-0" LONG #18J ASTM A615 GRADE 75

ANTENNA LIST

	No.	Elev.	Description
	-	TOP	LIGHTNING ROD
	1-12	TOP	(12) DB980H PCS
	-	TOP	14' LOW PROFILE PLATFORM
(FUT)	13-24	127.00	(12) SWEDCOM ALP-9212-N
(FUT)	-	127.00	14' LOW PROFILE PLATFORM (CLAMP-ON)
(FUT)	25-36	107.00	(12) SWEDCOM ALP-9212-N
(FUT)	-	107.00	14' LOW PROFILE PLATFORM (CLAMP-ON)
	-	80.00	GPS ANTENNA W/ MOUNT

STEP BOLTS FULL HEIGHT.
ANTENNA FEED LINES RUN INSIDE OF POLE.

STATE OF CONNECTICUT ... No. 1766 LICENSED PROFESSIONAL ENGINEER
9-29-97

	90 MPH WIND		50 MPH WIND	
Elevation	Lateral Deflection (Inches)	Rotation (sway) (degrees)	Lateral Deflection (Inches)	Rotation (sway) (degrees)
TOP	108.6	6.063	33.5	1.871

SHAFT SECTION DATA

Shaft Section	Section Length (feet)	Plate Thickness (in.)	Lap Splice (in.)	Diameter Across Flats (inches) @ Top	Diameter Across Flats (inches) @ Bottom
1	42.00	0.2500		22.000	29.141
2	35.00	0.3125	45.00	28.004	33.955
3	35.25	0.3750	51.00	32.607	38.601
4	47.50	0.4375	57.00	37.043	45.120

UNFACTORED BASE REACTIONS

MOMENT = 2616 ft-kips
SHEAR = 25.0 kips
AXIAL = 26.0 kips

SUMMIT MANUFACTURING INC.
225 KIWANIS BOULEVARD, WEST HAZELTON, PA 18201
PHONE: (717) 454-8730 E-MAIL: SUMMITL@EPIX.NET
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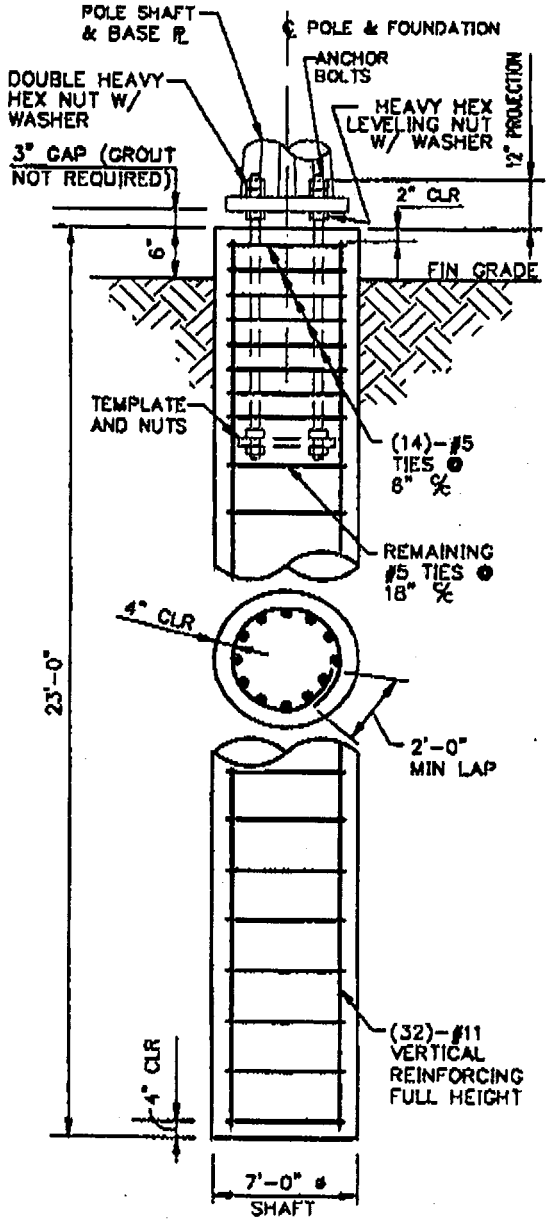
PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street, Suite 500, Columbus, Ohio 43215
(614)-221-6679 FAX (614)-221-0166

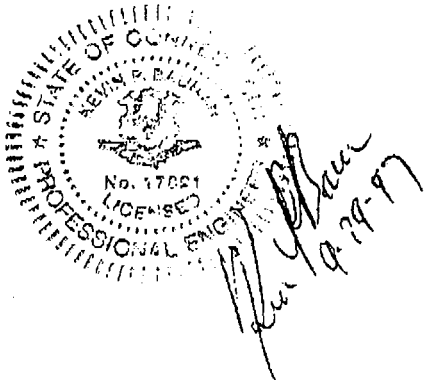
THERE ARE TWO NOTCHES ON THE ANCHOR BOLT TEMPLATES LOCATED 180° APART. THE CONTRACTOR SHALL POSITION THE ANCHOR BOLTS AND TEMPLATES IN THE FOUNDATION SUCH THAT A LINE DEFINED BY THESE TWO NOTCHES ARE ALIGNED IN THE DIRECTION OF THE EQUIPMENT SHELTER OR COMPONENTS. THIS IS REQUIRED SO THAT THE POLE SHAFT EXIT PORTS CAN BE ORIENTED PROPERLY.



Page 2 Of 2
By RKT Date 9-29-1997
Summit Job No. 2737 PJF No. 29297- 566
Revision No. Date
Pole 150 FT POLE
Location BRANFORD, CT : ACORN RD.
Site CT03XC031
Owner SPRINT SPECTRUM
Design 90 MPH/ 78 MPH + 1/2" RADIAL ICE
According to TIA/ EIA-222-F 1996

NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 (GRADE 60) EXCEPT THAT CAISSON TIES MAY BE ASTM A-615 (GRADE 40).
3. SEE PAGE 1 FOR ANCHOR BOLT QUANTITY, SIZE, LENGTH AND BOLT CIRCLE.
4. TOTAL CONCRETE = 33 CUBIC YARDS
5. FOUNDATION DESIGN IS BASED UPON SUMMARY OF SOIL PARAMETERS PREPARED BY: DR. CLARENCE WELTI, P.E., P.C. GEOTECHNICAL ENGINEERING
   DATED: 12-16-96
6. CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND CONSULT THE GEOTECHNICAL ENGINEER AS NECESSARY PRIOR TO CONSTRUCTION.
7. GEOTECHNICAL REPORT INDICATES GROUNDWATER WAS LOCATED AT 5 FT BELOW GRADE AT TIME OF THE SOIL BORING.



CAISSON (DRILLED PIER) FOUNDATION

Sm673662

PJF_Pole (tm) - Monopole Design Program
Windows Version 1.28.0000 Mon Sep 29, 1997 - 1:00:08 pm
(c) 1993 to 1997 PAUL J. FORD AND COMPANY, Columbus, Ohio

Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

Pole Height : 147 ft
Pole Shape : 18-Sided Polygon
Pole Type : Taper shaft - Slip Joint Splice
Pole Taper : 0.170034 (in/ft)

INPUT TUBE PROPERTIES:

Tube Sect No.	Top / Splice Elev (ft)	Bot Tube Elev (ft)	Tube Length (ft)	Wall Thick [t] (in)	Steel [Fy] (ksi)	Top Diam [Dt] (in)	Bot Diam [Db] (in)	Slip Joint Overlap (in)
1.	147.00	105.00	42.000	0.25000	60	22.000	29.141	45.00
2.	108.75	73.75	35.000	0.31250	60	28.004	33.955	51.00
3.	78.00	42.75	35.250	0.37500	60	32.607	38.601	57.00
4.	47.50	0.00	47.500	0.43750	60	37.043	45.120	

TUBE SECTION PROPERTIES:

Tube Sect No.	Section Weight (kips)	Location	Elev (ft)	Diam. Across Flats (in)	Wall Thick [t] (in)	[W/t] Ratio	Diam/ Thick [D/t] Ratio	Area (in^2)	Ix (in^4)
1	2.871	@Top	147.0	22.000	0.2500	13.75	88.00	17.26	1031.2
		@Splice	108.8	28.504		18.34	114.02	22.42	2260.4
		@Bot	105.0	29.141		18.79	116.57	22.92	2416.9
2	3.623	@Top	108.8	28.004	0.3125	14.04	89.61	27.47	2660.2
		@Splice	78.0	33.232		16.99	106.34	32.65	4469.3
		@Bot	73.8	33.955		17.40	108.66	33.37	4770.1
3	5.029	@Top	78.0	32.607	0.3750	13.57	86.95	38.36	5034.3
		@Splice	47.5	37.793		16.01	100.78	44.54	7876.0
		@Bot	42.8	38.601		16.39	102.94	45.50	8397.1
4	9.122	@Top	47.5	37.043	0.4375	13.17	84.67	50.83	8603.4
		@Bot	0.0	45.120		16.42	103.13	62.04	15646.3

Total Shaft Steel Weight = 20.645 kips

PJF_Pole (tm) - Monopole Design Program
Windows Version 1.28.0000 Mon Sep 29, 1997 - 1:00:08 pm
(c) 1993 to 1997 PAUL J. FORD AND COMPANY, Columbus, Ohio

Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

Segment Properties: (@ Max Segment = 10 ft)

Tube Segmt No.	Segment Feature Location	Segment Elev. (ft)	Diam. Across Flats (in)	Wall Thick [t] (in)	[W/t] Ratio	Diam/ Thick [D/t] Ratio	Area (in^2)	Ix (in^4)
1.	top	147.000	22.000	0.25000	13.75	88.00	17.26	1031.2
2.	<arm [1]>	147.000	22.000	0.25000	13.75	88.00	17.26	1031.2
3.	<arm [2]>	147.000	22.000	0.25000	13.75	88.00	17.26	1031.2
4.	<arm [3]>	147.000	22.000	0.25000	13.75	88.00	17.26	1031.2
5.		140.000	23.190	0.25000	14.59	92.76	18.20	1209.9
6.		130.000	24.891	0.25000	15.79	99.56	19.55	1499.4
7.	<arm [4]>	127.000	25.401	0.25000	16.15	101.60	19.96	1594.5
8.	<arm [5]>	127.000	25.401	0.25000	16.15	101.60	19.96	1594.5
9.		120.000	26.591	0.25000	16.99	106.36	20.90	1831.7
10.		110.000	28.291	0.25000	18.19	113.17	22.25	2209.8
11.	top sec(2)	108.750	28.504	0.25000	18.34	114.02	22.42	2260.4
12.	<arm [6]>	107.000	28.301	0.31250	14.21	90.56	27.76	2746.9
13.	<arm [7]>	107.000	28.301	0.31250	14.21	90.56	27.76	2746.9
14.	bot sec(1)	105.000	29.141	0.31250	14.68	93.25	28.59	3001.7
15.		100.000	29.492	0.31250	14.88	94.37	28.94	3112.4
16.		90.000	31.192	0.31250	15.84	99.81	30.63	3688.8
17.		80.000	32.892	0.31250	16.80	105.26	32.31	4332.2
18.	<arm [8]>	80.000	32.892	0.31250	16.80	105.26	32.31	4332.2
19.	top sec(3)	78.000	33.232	0.31250	16.99	106.34	32.65	4469.3
20.	bot sec(2)	73.750	33.330	0.37500	13.91	88.88	39.22	5380.6
21.		70.000	33.968	0.37500	14.21	90.58	39.98	5698.9
22.		60.000	35.668	0.37500	15.01	95.11	42.01	6608.8
23.		50.000	37.368	0.37500	15.81	99.65	44.03	7610.7
24.	top sec(4)	47.500	37.793	0.37500	16.01	100.78	44.54	7876.0
25.	bot sec(3)	42.750	37.851	0.43750	13.49	86.52	51.95	9185.4
26.		40.000	38.319	0.43750	13.68	87.59	52.60	9534.1
27.		30.000	40.019	0.43750	14.37	91.47	54.96	10876.4
28.		20.000	41.719	0.43750	15.05	95.36	57.32	12339.0
29.		10.000	43.420	0.43750	15.74	99.24	59.68	13927.2
30.	base	0.000	45.120	0.43750	16.42	103.13	62.04	15646.3

Total Number of Antennas / Arms = 8

PJF_Pole (tm) - Monopole Design Program
Windows Version 1.28.0000 Mon Sep 29, 1997 - 1:00:08 pm

Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

ANTENNA AND ARM PROPERTIES AND LOAD DATA:

LOAD CASE 1: BASIC WIND VELOCITY = 90.00 MPH

Ant Arm No.	Arm Mount. Elev. (ft)	Load Applic. Elev. (ft)	Arm Length (ft)	Ice Load Case	Antenna Area [CaAa] (sf)	Antenna Force [qzGhCaAa] (lbs)	Antenna Weight (lbs)
[1]	147.000	149.000	0.0000	No Ice:	2.50	134.77	75.00
	Description: Lightning Rod				[qz] (psf)	[qz] [Gh] (psf)	
		[Gh] 1.69	[Kz] 1.538	No Ice:	31.899	53.909	
[2]	147.000	147.000	0.0000	No Ice:	49.56	2661.43	108.00
	Description: (12) DB980H PCS				[qz] (psf)	[qz] [Gh] (psf)	
		[Gh] 1.69	[Kz] 1.532	No Ice:	31.776	53.701	
[3]	147.000	147.000	0.0000	No Ice:	35.00	1879.54	1300.00
	Description: 14' Low Profile Platform				[qz] (psf)	[qz] [Gh] (psf)	
		[Gh] 1.69	[Kz] 1.532	No Ice:	31.776	53.701	
[4]	127.000	127.000	0.0000	No Ice:	46.90	2415.52	324.00
	Description: (12) Swedcom ALP-9212-N (Future)				[qz] (psf)	[qz] [Gh] (psf)	
		[Gh] 1.69	[Kz] 1.470	No Ice:	30.475	51.504	
[5]	127.000	127.000	0.0000	No Ice:	35.00	1802.63	1300.00
	Description: 14' Low Profile Platform (Future)				[qz] (psf)	[qz] [Gh] (psf)	
		[Gh] 1.69	[Kz] 1.470	No Ice:	30.475	51.504	
[6]	107.000	107.000	0.0000	No Ice:	46.90	2300.10	324.00
	Description: (12) Swedcom ALP-9212-N (Future)				[qz] (psf)	[qz] [Gh] (psf)	
		[Gh] 1.69	[Kz] 1.399	No Ice:	29.019	49.043	
[7]	107.000	107.000	0.0000	No Ice:	35.00	1716.49	1300.00
	Description: 14' Low Profile Platform (Future)				[qz] (psf)	[qz] [Gh] (psf)	
		[Gh] 1.69	[Kz] 1.399	No Ice:	29.019	49.043	
[8]	80.000	80.000	0.0000	No Ice:	6.00	270.80	210.00
	Description: GPS Antenna w/ Mount				[qz] (psf)	[qz] [Gh] (psf)	
		[Gh] 1.69	[Kz] 1.288	No Ice:	26.706	45.133	

PJF_Pole (tm) - Monopole Design Program
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Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

POLE SHAFT LOADS:

LOAD CASE 1: BASIC WIND VELOCITY = 90.00 MPH

Design Loads per TIA/EIA-222-F Standard; Gust Factor ..... Gh = 1.69
Pole DL Overload Factor = 1

Per TIA/EIA Table 1: Note 3: For all cross sectional shapes, Force Coefficient [Cf] need not exceed 1.2 for any value of C. (Where C=sqrt(Kz)*V*D.)

Top of Segment Elev. (ft)	Expos Coeff [Kz]	Veloc Press [qz] (psf)	Pole Veloc Coeff [C]	Force Coeff [Cf]	Projected Area Shaft Segment [Ae] (sf)	[Cf Ae] (sf)	Segment Wind Force (lbs)	Shaft Segment Weight (lbs)
147.000	1.532	31.78	204.25	0.650	0.000	0.000	0.00	0.00
147.000	1.532	31.78	204.25	0.650	0.000	0.000	0.00	0.00
147.000	1.532	31.78	204.25	0.650	0.000	0.000	0.00	0.00
147.000	1.532	31.78	204.25	0.650	1.840	1.196	64.24	58.95
140.000	1.511	31.34	213.81	0.650	13.280	8.632	459.86	425.54
130.000	1.480	30.68	227.07	0.650	20.175	13.114	686.46	646.93
127.000	1.470	30.48	230.95	0.650	4.205	2.733	141.25	134.90
127.000	1.470	30.48	230.95	0.650	2.124	1.380	71.10	68.14
120.000	1.446	29.99	239.82	0.650	15.263	9.921	506.28	489.81
110.000	1.411	29.25	252.01	0.650	23.009	14.956	747.68	738.75
108.750	1.406	29.15	253.48	0.650	2.363	1.536	75.70	365.19
107.000	1.399	29.02	251.10	0.650	2.351	1.528	75.16	94.18
107.000	1.399	29.02	251.10	0.650	2.366	1.538	75.41	94.75
105.000	1.392	28.86	257.86	0.650	4.815	3.130	152.88	192.91
100.000	1.373	28.46	259.15	0.650	12.182	7.918	383.04	488.09
90.000	1.332	27.62	269.99	0.650	25.427	16.527	782.09	1019.23
80.000	1.288	26.71	279.96	0.650	24.095	15.662	719.06	966.37
80.000	1.288	26.71	279.96	0.650	2.748	1.786	80.62	110.24
78.000	1.279	26.51	281.83	0.650	5.513	3.583	160.85	698.53
73.750	1.258	26.09	280.41	0.650	11.039	7.175	318.46	530.43
70.000	1.240	25.71	283.65	0.650	11.266	7.323	320.04	541.45
60.000	1.186	24.60	291.36	0.650	29.156	18.952	803.99	1401.82
50.000	1.126	23.35	297.40	0.650	30.573	19.873	803.36	1470.68
47.500	1.110	23.01	298.59	0.650	6.269	4.075	159.29	1029.25
42.750	1.077	22.33	294.58	0.650	15.647	10.171	389.29	876.87
40.000	1.057	21.91	295.40	0.650	9.558	6.213	231.64	535.76
30.000	1.000	20.74	300.14	0.650	32.782	21.308	759.56	1838.09
20.000	1.000	20.74	312.89	0.650	34.199	22.230	779.01	1918.43
10.000	1.000	20.74	325.65	0.650	35.616	23.151	811.28	1998.77
1.000	1.000	20.74	337.12	0.650	33.266	21.623	757.75	1867.59
						Summation TOTAL =	11315.36	20601.65

---------(END LOAD CASE 1 -- POLE SHAFT LOADS)----------

PJF_Pole (tm) - Monopole Design Program
Windows Version 1.28.0000 Mon Sep 29, 1997 - 1:00:08 pm
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Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

POLE SHAFT SEGMENTS -- AXIAL AND SHEAR FORCES:

LOAD CASE 1: BASIC WIND VELOCITY = 90.00 MPH

Tube Segment No.	Segment Elevation (ft)	Axial Load (kips)	Cumulative Axial Load (kips)	Horiz. Shear (kips)	Cumulative Horiz. Shear (kips)
1.	147.000	0.000	0.000	0.000	0.000
2.	147.000	0.075	0.075	0.135	0.135
3.	147.000	0.108	0.183	2.661	2.796
4.	147.000	1.359	1.542	1.944	4.740
5.	140.000	0.426	1.967	0.460	5.200
6.	130.000	0.647	2.614	0.686	5.886
7.	127.000	0.459	3.073	2.557	8.443
8.	127.000	1.368	4.441	1.874	10.317
9.	120.000	0.490	4.931	0.506	10.823
10.	110.000	0.739	5.670	0.748	11.571
11.	108.750	0.365	6.035	0.076	11.646
12.	107.000	0.418	6.453	2.375	14.022
13.	107.000	1.395	7.848	1.792	15.814
14.	105.000	0.193	8.041	0.153	15.967
15.	100.000	0.488	8.529	0.383	16.350
16.	90.000	1.019	9.548	0.782	17.132
17.	80.000	0.966	10.515	0.719	17.851
18.	80.000	0.320	10.835	0.351	18.202
19.	78.000	0.699	11.534	-0.161	18.363
20.	73.750	0.530	12.064	0.318	18.681
21.	70.000	0.541	12.605	0.320	19.001
22.	60.000	1.402	14.007	0.804	19.805
23.	50.000	1.471	15.478	0.803	20.609
24.	47.500	1.029	16.507	0.159	20.768
25.	42.750	0.877	17.384	0.389	21.157
26.	40.000	0.536	17.920	0.232	21.389
27.	30.000	1.838	19.758	0.760	22.149
28.	20.000	1.918	21.676	0.779	22.928
29.	10.000	1.999	23.675	0.811	23.739
30.	1.000	1.868	25.543	0.758	24.497
Base	0.000		25.543		24.497

---------(END LOAD CASE 1 -- AXIAL AND SHEAR FORCE)----------

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Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

POLE SHAFT SEGMENTS -- MOMENTS and DEFLECTIONS:

LOAD CASE 1: BASIC WIND VELOCITY = 90.00 MPH

Segmnt Elev (ft)	[-------- MOMENTS (ft-kips) ---------] From Ant/ Arm	From Shaft Wind	From P-Delta Effects	Total Moment	[--DEFLECTIONS (inch)-------] No P-Delta Effects	Total W/ P-Delta Effects	Total Rotation (degrees)
147.00	0.270	0.000	0.000	0.270	104.503	108.627	6.063
147.00	0.270	0.000	0.000	0.270	104.503	108.627	6.063
147.00	0.270	0.000	0.000	0.270	104.503	108.627	6.063
147.00	0.270	0.000	0.019	0.289	103.278	107.353	6.063
140.00	33.000	1.819	1.298	36.117	94.723	98.447	6.031
130.00	79.757	10.122	3.655	93.534	82.663	85.893	5.898
127.00	93.784	13.965	4.201	111.951	80.287	83.420	5.841
127.00	93.784	13.965	4.516	112.265	79.107	82.192	5.841
120.00	156.042	25.436	7.797	189.275	70.968	73.720	5.667
110.00	244.981	48.070	12.860	305.910	59.863	62.162	5.320
108.75	256.098	51.421	13.386	320.905	58.794	61.050	5.270
107.00	271.662	56.313	13.943	341.918	57.730	59.943	5.207
107.00	271.662	56.313	14.531	342.506	56.680	58.850	5.207
105.00	297.483	62.195	15.960	375.639	54.592	56.678	5.135
100.00	362.036	78.239	19.590	459.864	49.508	51.389	4.937
90.00	491.141	116.133	26.990	634.263	39.995	41.494	4.480
80.00	620.245	161.930	33.664	815.840	32.265	33.457	3.965
80.00	620.245	161.930	34.393	816.568	31.464	32.626	3.965
78.00	646.608	172.053	35.882	854.543	29.885	30.985	3.857
73.75	702.628	194.617	38.963	936.208	26.852	27.834	3.647
70.00	752.058	215.722	42.012	1009.793	23.980	24.850	3.459
60.00	883.871	277.539	49.408	1210.818	17.509	18.133	2.946
50.00	1015.684	347.400	56.270	1419.353	12.087	12.509	2.419
47.50	1048.637	366.108	57.555	1472.300	11.131	11.518	2.287
42.75	1111.248	403.009	60.767	1575.024	8.924	9.231	2.054
40.00	1147.497	425.175	62.597	1635.268	7.717	7.981	1.920
30.00	1279.310	510.680	68.067	1858.057	4.325	4.470	1.432
20.00	1411.123	603.832	72.337	2087.291	1.914	1.977	0.949
10.00	1542.935	704.920	75.116	2322.971	0.476	0.491	0.471
0.00	1674.748	814.264	76.110	2565.122	0.000	0.000	0.000

---------(END LOAD CASE 1 -- MOMENTS AND DEFLECTIONS)----------

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Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

POLE SHAFT SEGMENTS -- ACTUAL VS. ALLOWABLE STRESSES:

LOAD CASE 1: BASIC WIND VELOCITY = 90.00 MPH

Note: Per TIA/EIA Sec. 3.1.1.1: Allow a 1/3 stress increase for poles under 700 feet in height. The allowable stresses shown include the factor of 1.333

Segmnt Elev (ft)	[---------- ACTUAL STRESSES ----------] Bending [fb] (ksi)	Axial [fa] (ksi)	Torsion [ft] (ksi)	Shear [fv] (ksi)	Combined [Ftot] (ksi)	Allow. Stress [Fb] (ksi)	Actual/ Allowable [Ftot/Fb] Ratio
147.00	0.035	0.000	0.000	0.000	0.035	48.00	0.0007
147.00	0.035	0.004	0.008	0.016	0.056	48.00	0.0012
147.00	0.035	0.011	0.162	0.323	0.841	48.00	0.0175
147.00	0.038	0.089	0.271	0.548	1.423	48.00	0.0297
140.00	4.217	0.108	0.243	0.570	4.549	48.00	0.0948
130.00	9.460	0.134	0.211	0.601	9.696	48.00	0.2020
127.00	10.866	0.154	0.323	0.844	11.204	48.00	0.2334
127.00	10.896	0.223	0.413	1.031	11.397	48.00	0.2374
120.00	16.741	0.236	0.377	1.033	17.151	48.00	0.3573
110.00	23.862	0.255	0.332	1.038	24.233	48.00	0.5049
108.75	24.654	0.269	0.327	1.037	25.035	48.00	0.5216
107.00	21.463	0.232	0.349	1.008	21.822	48.00	0.4546
107.00	21.500	0.283	0.411	1.137	21.947	48.00	0.4572
105.00	22.219	0.281	0.388	1.114	22.650	48.00	0.4719
100.00	26.548	0.295	0.378	1.127	26.969	48.00	0.5619
90.00	32.676	0.312	0.338	1.116	33.084	48.00	0.6892
80.00	37.739	0.325	0.303	1.102	38.142	48.00	0.7946
80.00	37.772	0.335	0.312	1.124	38.189	48.00	0.7956
78.00	38.713	0.353	0.305	1.122	39.144	48.00	0.8155
73.75	35.333	0.308	0.254	0.950	35.701	48.00	0.7438
70.00	36.669	0.315	0.244	0.948	37.042	48.00	0.7717
60.00	39.814	0.333	0.221	0.941	40.198	48.00	0.8375
50.00	42.459	0.352	0.202	0.934	42.856	48.00	0.8928
47.50	43.043	0.371	0.197	0.930	43.458	48.00	0.9054
42.75	39.542	0.335	0.169	0.813	39.913	48.00	0.8315
40.00	40.042	0.341	0.165	0.811	40.418	48.00	0.8420
30.00	41.652	0.359	0.151	0.804	42.044	48.00	0.8759
20.00	42.997	0.378	0.139	0.798	43.406	48.00	0.9043
10.00	44.123	0.397	0.128	0.794	44.548	48.00	0.9281
0.00	45.068	0.412	0.118	0.788	45.507	48.00	0.9481

---------(END LOAD CASE 1 -- ACTUAL VS. ALLOWABLE STRESSES)----------

PJF_Pole (tm) - Monopole Design Program
Windows Version 1.28.0000 Mon Sep 29, 1997 - 1:00:08 pm

Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

ANTENNA AND ARM PROPERTIES AND LOAD DATA:

LOAD CASE 2: WIND VELOCITY = 77.94228 MPH + 0.50 inches Radial Ice.

Ant Arm No.	Arm Mount. Elev. (ft)	Load Applic. Elev. (ft)	Arm Length (ft)	Ice Load Case	Antenna Area [CaAa] (sf)	Antenna Force [qzGhCaAa] (lbs)	Antenna Weight (lbs)
[1]	147.000	149.000	0.0000	W/ Ice:	5.00	202.16	100.00
Description: Lightning Rod							
		[Gh]	[Kz]		[qz] (psf)	[qz] [Gh] (psf)	
		1.69	1.538	W/ Ice:	23.924	40.432	
[2]	147.000	147.000	0.0000	W/ Ice:	58.44	2353.72	312.00
Description: (12) DB980H PCS							
		[Gh]	[Kz]		[qz] (psf)	[qz] [Gh] (psf)	
		1.69	1.532	W/ Ice:	23.832	40.276	
[3]	147.000	147.000	0.0000	W/ Ice:	40.00	1611.04	2100.00
Description: 14' Low Profile Platform							
		[Gh]	[Kz]		[qz] (psf)	[qz] [Gh] (psf)	
		1.69	1.532	W/ Ice:	23.832	40.276	
[4]	127.000	127.000	0.0000	W/ Ice:	76.68	2961.97	864.00
Description: (12) Swedcom ALP-9212-N (Future)							
		[Gh]	[Kz]		[qz] (psf)	[qz] [Gh] (psf)	
		1.69	1.470	W/ Ice:	22.857	38.628	
[5]	127.000	127.000	0.0000	W/ Ice:	40.00	1545.11	2100.00
Description: 14' Low Profile Platform (Future)							
		[Gh]	[Kz]		[qz] (psf)	[qz] [Gh] (psf)	
		1.69	1.470	W/ Ice:	22.857	38.628	
[6]	107.000	107.000	0.0000	W/ Ice:	76.68	2820.45	864.00
Description: (12) Swedcom ALP-9212-N (Future)							
		[Gh]	[Kz]		[qz] (psf)	[qz] [Gh] (psf)	
		1.69	1.399	W/ Ice:	21.765	36.782	
[7]	107.000	107.000	0.0000	W/ Ice:	40.00	1471.28	2100.00
Description: 14' Low Profile Platform (Future)							
		[Gh]	[Kz]		[qz] (psf)	[qz] [Gh] (psf)	
		1.69	1.399	W/ Ice:	21.765	36.782	
[8]	80.000	80.000	0.0000	W/ Ice:	8.00	270.80	320.00
Description: GPS Antenna w/ Mount							
		[Gh]	[Kz]		[qz] (psf)	[qz] [Gh] (psf)	
		1.69	1.288	W/ Ice:	20.029	33.849	

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Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

POLE SHAFT LOADS:

LOAD CASE 2: WIND VELOCITY = 77.94 MPH with 0.50 inches Radial Ice.

Design Loads per TIA/EIA-222-F Standard; Gust Factor ..... Gh = 1.69
Pole DL Overload Factor = 1
Per TIA/EIA Table 1: Note 3: For all cross sectional shapes, Force Coefficient [Cf] need not exceed 1.2 for any value of C. (Where C=sqrt(Kz)*V*D.)

Top of Segment Elev. (ft)	Expos Coeff [Kz]	Veloc Press [qz] (psf)	Pole Veloc Coeff [C]	Force Coeff [Cf]	Projected Area Shaft Segment [Ae] (sf)	[Cf Ae] (sf)	Segment Wind Force (lbs)	Shaft Segment Weight (lbs)
147.000	1.532	23.83	176.89	0.650	0.000	0.000	0.00	0.00
147.000	1.532	23.83	176.89	0.650	0.000	0.000	0.00	0.00
147.000	1.532	23.83	176.89	0.650	0.000	0.000	0.00	0.00
147.000	1.532	23.83	176.89	0.650	1.924	1.250	50.36	72.89
140.000	1.511	23.50	185.16	0.650	13.863	9.011	360.05	526.04
130.000	1.480	23.01	196.65	0.650	21.009	13.656	536.12	799.43
127.000	1.470	22.86	200.01	0.650	4.372	2.842	110.13	166.65
127.000	1.470	22.86	200.01	0.650	2.207	1.435	55.42	84.17
120.000	1.446	22.49	207.69	0.650	15.847	10.300	394.22	605.01
110.000	1.411	21.94	218.24	0.650	23.843	15.498	581.07	912.24
108.750	1.406	21.87	219.52	0.650	2.447	1.590	58.77	450.86
107.000	1.399	21.76	217.46	0.650	2.435	1.583	58.36	111.90
107.000	1.399	21.76	217.46	0.650	2.449	1.592	58.55	112.58
105.000	1.392	21.65	223.31	0.650	4.982	3.238	118.63	229.19
100.000	1.373	21.35	224.43	0.650	12.599	8.189	297.10	579.85
90.000	1.332	20.71	233.82	0.650	26.260	17.069	605.80	1210.62
80.000	1.288	20.03	242.45	0.650	24.845	16.149	556.09	1147.59
80.000	1.288	20.03	242.45	0.650	2.831	1.840	62.30	130.90
78.000	1.279	19.88	244.07	0.650	5.679	3.692	124.28	829.40
73.750	1.258	19.57	242.84	0.650	11.372	7.392	246.06	613.42
70.000	1.240	19.28	245.65	0.650	11.599	7.539	247.13	626.11
60.000	1.186	18.45	252.33	0.650	29.990	19.493	620.23	1620.83
50.000	1.126	17.51	257.56	0.650	31.407	20.414	618.95	1700.19
47.500	1.110	17.26	258.59	0.650	6.436	4.183	122.64	1189.73
42.750	1.077	16.75	255.11	0.650	16.064	10.442	299.74	994.29
40.000	1.057	16.43	255.82	0.650	9.808	6.375	178.28	607.47
30.000	1.000	15.55	259.93	0.650	33.616	21.850	584.16	2083.95
20.000	1.000	15.55	270.97	0.650	35.033	22.771	598.49	2174.79
10.000	1.000	15.55	282.02	0.650	36.450	23.692	622.70	2265.62
1.000	1.000	15.55	291.96	0.650	34.016	22.110	581.13	2116.72
					Summation TOTAL =		8746.76	23962.45

---------(END LOAD CASE 2 -- POLE SHAFT LOADS)----------

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Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

POLE SHAFT SEGMENTS -- AXIAL AND SHEAR FORCES:

LOAD CASE 2: WIND VELOCITY = 77.94 MPH with 0.50 inches Radial Ice.

Tube Segment No.	Segment Elevation (ft)	Axial Load (kips)	Cumulative Axial Load (kips)	Horiz. Shear (kips)	Cumulative Horiz. Shear (kips)
1.	147.000	0.000	0.000	0.000	0.000
2.	147.000	0.100	0.100	0.202	0.202
3.	147.000	0.312	0.412	2.354	2.556
4.	147.000	2.173	2.585	1.661	4.217
5.	140.000	0.526	3.111	0.360	4.577
6.	130.000	0.799	3.910	0.536	5.113
7.	127.000	1.031	4.941	3.072	8.186
8.	127.000	2.184	7.125	1.601	9.786
9.	120.000	0.605	7.730	0.394	10.180
10.	110.000	0.912	8.642	0.581	10.761
11.	108.750	0.451	9.093	0.059	10.820
12.	107.000	0.976	10.069	2.879	13.699
13.	107.000	2.213	12.282	1.530	15.229
14.	105.000	0.229	12.511	0.119	15.347
15.	100.000	0.580	13.091	0.297	15.645
16.	90.000	1.211	14.301	0.606	16.250
17.	80.000	1.148	15.449	0.556	16.806
18.	80.000	0.451	15.900	0.333	17.139
19.	78.000	0.829	16.729	0.124	17.264
20.	73.750	0.613	17.343	0.246	17.510
21.	70.000	0.626	17.969	0.247	17.757
22.	60.000	1.621	19.590	0.620	18.377
23.	50.000	1.700	21.290	0.619	18.996
24.	47.500	1.190	22.480	0.123	19.119
25.	42.750	0.994	23.474	0.300	19.419
26.	40.000	0.607	24.081	0.178	19.597
27.	30.000	2.084	26.165	0.584	20.181
28.	20.000	2.175	28.340	0.598	20.779
29.	10.000	2.266	30.606	0.623	21.402
30.	1.000	2.117	32.722	0.581	21.983
Base	0.000		32.722		21.983

---------(END LOAD CASE 2 -- AXIAL AND SHEAR FORCE)----------

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Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

POLE SHAFT SEGMENTS -- MOMENTS and DEFLECTIONS:

LOAD CASE 2: WIND VELOCITY = 77.94 MPH with 0.50 inches Radial Ice.

Segmnt Elev (ft)	[-------- MOMENTS (ft-kips) ---------] From Ant/ Arm	From Shaft Wind	From P-Delta Effects	Total Moment	[--DEFLECTIONS (inch)-------] No P-Delta Effects	Total W/ P-Delta Effects	Total Rotation (degrees)
147.00	0.404	0.000	0.000	0.404	97.219	103.058	5.748
147.00	0.404	0.000	0.000	0.404	97.219	103.058	5.748
147.00	0.404	0.000	0.000	0.404	97.219	103.058	5.748
147.00	0.404	0.000	0.041	0.446	96.083	101.850	5.748
140.00	29.573	1.425	2.016	33.014	88.144	93.410	5.719
130.00	71.242	7.921	5.453	84.617	76.947	81.506	5.598
127.00	83.743	10.926	6.226	100.895	74.739	79.159	5.546
127.00	83.743	10.926	6.706	101.375	73.643	77.993	5.546
120.00	144.461	19.887	11.655	176.003	66.073	69.947	5.386
110.00	231.201	37.548	19.100	287.849	55.731	58.959	5.061
108.75	242.043	40.161	19.864	302.068	54.735	57.902	5.014
107.00	257.223	43.975	20.662	321.860	53.744	56.849	4.955
107.00	257.223	43.975	21.534	322.732	52.764	55.809	4.955
105.00	283.154	48.561	23.659	355.374	50.818	53.742	4.887
100.00	347.983	61.062	29.002	438.047	46.077	48.710	4.698
90.00	477.640	90.564	39.687	607.891	37.204	39.296	4.262
80.00	607.297	126.184	49.108	782.589	29.995	31.656	3.768
80.00	607.297	126.184	50.126	783.606	29.249	30.865	3.768
78.00	633.770	134.052	52.200	820.022	27.777	29.306	3.665
73.75	690.025	151.587	56.429	898.041	24.951	26.314	3.462
70.00	739.662	167.982	60.576	968.220	22.275	23.483	3.283
60.00	872.027	215.976	70.485	1158.488	16.251	17.114	2.791
50.00	1004.393	270.172	79.499	1354.063	11.208	11.791	2.288
47.50	1037.484	284.679	81.168	1403.331	10.321	10.854	2.161
42.75	1100.357	313.284	85.287	1498.928	8.271	8.694	1.940
40.00	1136.758	330.463	87.616	1554.836	7.150	7.513	1.812
30.00	1269.123	396.702	94.503	1760.328	4.004	4.202	1.349
20.00	1401.488	468.820	99.794	1970.102	1.771	1.856	0.892
10.00	1533.853	547.031	103.192	2184.077	0.440	0.461	0.442
0.00	1666.219	631.579	104.393	2402.191	0.000	0.000	0.000

---------(END LOAD CASE 2 -- MOMENTS AND DEFLECTIONS)----------

PJF_Pole (tm) - Monopole Design Program
Windows Version 1.28.0000 Mon Sep 29, 1997 - 1:00:08 pm
(c) 1993 to 1997 PAUL J. FORD AND COMPANY, Columbus, Ohio

Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

POLE SHAFT SEGMENTS -- ACTUAL VS. ALLOWABLE STRESSES:

LOAD CASE 2: WIND VELOCITY = 77.94 MPH with 0.50 inches Radial Ice.

Note: Per TIA/EIA Sec. 3.1.1.1: Allow a 1/3 stress increase for poles under 700 feet in height. The allowable stresses shown include the factor of 1.333

Segmnt Elev (ft)	[---------- ACTUAL STRESSES ----------] Bending [fb] (ksi)	Axial [fa] (ksi)	Torsion [ft] (ksi)	Shear [fv] (ksi)	Combined [Ftot] (ksi)	Allow. Stress [Fb] (ksi)	Actual/ Allowable [Ftot/Fb] Ratio
147.00	0.053	0.000	0.000	0.000	0.053	48.00	0.0011
147.00	0.053	0.006	0.012	0.023	0.084	48.00	0.0018
147.00	0.053	0.024	0.148	0.295	0.772	48.00	0.0161
147.00	0.058	0.150	0.241	0.488	1.279	48.00	0.0266
140.00	3.855	0.171	0.217	0.502	4.214	48.00	0.0878
130.00	8.558	0.200	0.188	0.522	8.844	48.00	0.1842
127.00	9.793	0.248	0.328	0.818	10.235	48.00	0.2132
127.00	9.839	0.357	0.405	0.978	10.474	48.00	0.2182
120.00	15.567	0.370	0.370	0.972	16.105	48.00	0.3355
110.00	22.453	0.388	0.326	0.965	22.951	48.00	0.4781
108.75	23.207	0.406	0.321	0.963	23.717	48.00	0.4941
107.00	20.204	0.363	0.363	0.985	20.699	48.00	0.4312
107.00	20.259	0.442	0.416	1.095	20.866	48.00	0.4347
105.00	21.020	0.438	0.392	1.071	21.607	48.00	0.4501
100.00	25.289	0.452	0.383	1.079	25.865	48.00	0.5389
90.00	31.317	0.467	0.342	1.059	31.877	48.00	0.6641
80.00	36.200	0.478	0.307	1.038	36.752	48.00	0.7657
80.00	36.248	0.492	0.316	1.058	36.817	48.00	0.7670
78.00	37.149	0.512	0.309	1.055	37.735	48.00	0.7862
73.75	33.892	0.442	0.257	0.891	34.392	48.00	0.7165
70.00	35.160	0.449	0.247	0.886	35.663	48.00	0.7430
60.00	38.093	0.466	0.224	0.873	38.606	48.00	0.8043
50.00	40.506	0.484	0.204	0.861	41.031	48.00	0.8548
47.50	41.027	0.505	0.199	0.857	41.572	48.00	0.8661
42.75	37.632	0.452	0.171	0.746	38.117	48.00	0.7941
40.00	38.073	0.458	0.167	0.743	38.563	48.00	0.8034
30.00	39.462	0.476	0.153	0.733	39.967	48.00	0.8326
20.00	40.583	0.494	0.140	0.723	41.105	48.00	0.8563
10.00	41.485	0.513	0.129	0.715	42.023	48.00	0.8755
0.00	42.205	0.527	0.120	0.707	42.757	48.00	0.8908

---------(END LOAD CASE 2 -- ACTUAL VS. ALLOWABLE STRESSES)----------

PJF_Pole (tm) - Monopole Design Program
Windows Version 1.28.0000 Mon Sep 29, 1997 - 1:00:08 pm
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Job No.....: 29297-566 Design No: Summit Job# 2737 Engineer : DLS
Description : 147' Pole - Branford, Connecticut: Site #CT03XC021: Acorn Rd.
Design..... : 90 mph & 78 mph w/.5" ice
Owner..... : Sprint Spectrum Client: Summit Manufacturing Inc.
Status..... : Preliminary Design Revision: Rev. Date :

MONOPOLE BASE PLATE DESIGN DETAILS

Shaft Shape .....:	18 Sided Polygon	Stress Increase ...:	1.333 Factor
Base Dia, DP ....:	45.120 Inches	Base Plate Shape ..:	Square
PT-to-PT, DP ....:	45.816 Inches		
Min Bolt Circle .:	52.120 Inches	Use Bolt Circle ...:	52.000 Inches

Base Reactions :	DESIGN	USER
Moment .....:	2565.122 Ft-Kips	2616 Ft-Kips
Axial Load .....:	25.543 Kips	26 Kips

Anchor Bolt Details :	DESIGN	USER
Number of Bolts .....:	16	16
Bolt Diameter .....:	2.250 Inches	2.250 Inches
Bolt Type .....:	ASTM A615#18J	ASTM A615#18J
Y-Distance .....:	9	9
Mom. of Inertia .....:	5432.99	5408.00
Bolt Tension, T .....:	147.65 Kips	150.92 Kips
Allowable Tension ...:	194.95 Kips	194.95 Kips
Bolt Compression, C .:	149.24 Kips	152.55 Kips

Base Plate Details :	DESIGN	USER
Plate Moment, MPL ...:	2089.41 In-Kips	2099.06 In-Kips
Bend Plane, W .....:	30.28 Inches	29.83 Inches
Plate Thickness, t ..:	2.878 Inches	3.000 Inches
Plate Width .....:	53.315 Inches	53.000 Inches
Plate Steel .....:	ASTM A572 GRADE 50 (50 KSI)	ASTM A572 GRADE 50 (50 KSI)
Gross Weight .....:	2319.90 Lbs	2389.80 Lbs
Net Weight .....:	1792.30 Lbs	1839.80 Lbs
Allowable Stress ....:	49.99 Ksi	49.99 Ksi
Actual Stress .....:	49.99 Ksi	46.91 Ksi
Act./Allow Ratio ....:	1.00	0.94

BASE PLATE DESIGN SUMMARY

USE FOLLOWING SPECIFICATIONS:

Plate Thickness .....:	3.000 Inches	Number of Bolts ..:	16
Plate Width/Diameter :	53.000 Inches (Square)	Bolt Circle .....:	52.00 Inches
Plate Weight .....:	2.390 Kips	Bolt Diameter ....:	2.25 Inches
		Bolt Type .....:	ASTM A615#18J

PAUL J FORD AND COMPANY CAISSON DESIGN PROGRAM 09-29-199

JOB NUMBER : 29297-566
TOWER TYPE : 150 FT POLE
SITE / OWNER : CT03XC021 / SPRINT SPECTRUM

DIAMETER:	7.00	COMPRESSION:	26.0	FRICTION S.F.:	2.00	WATER AT:	5.0 FT
DEPTH:	22.50	HORIZONTAL:	25.0	LATERAL S.F.:	2.00	FULL COHESION:	2.0 FT
REBAR:	20.40	UPLIFT:	00.0	CONCRETE S.F.:	1.30	STEEL COVER:	4.0 IN
		MOMENT:	2616.0			CONCRETE Fc:	3000.0 PS

SOIL PROFILE : (all soil parameters are ultimate-----)

LAYER	THICKNESS (FT)	WEIGHT (PCF)	SKIN (PSF)	BEARING (PSF)	PHI (DEG)	KP	COHESION (PSF
1	3	100	0	0	0	0	0
2	2	135	0	16000	36	3.852	0
3	21	37.6	0	16000	36	3.852	0
4	5	37.6	0	16000	0	0	500
5	19	37.6	0	16000	36	3.852	0

LATERAL / MOMENT CAPACITY (CHECK) :

DIA (FT)	DEPTH (FT)	Mwork (K-FT)	Mult (K-FT)	Hwork (K)	Hult (K)	CENTER (FT)	C YARD
7.00	22.50	3008.50 (SF: 02.05)	6167.03	25.00 (SF: 02.19)	54.80	15.20	32.78

INFLECTION:	MAX FACTORED MOMENT:	AREA STEEL REQUIRED:
4.70	3605.98	20.40 (MIN = 27.71)

UPLIFT CAPACITY (CHECK) :

DIA (FT)	DEPTH (FT)	UPLIFT (K)	ALLOW UPLIFT (K)	C YARDS
7.00	22.50	00.0	106.22	32.78

COMPRESSION CAPACITY (CHECK) :

DIA (FT)	DEPTH (FT)	COMPRESSION (K)	ALLOW COMPRESSION (K)	C YARDS
7.00	22.50	26.0	307.88	32.78

500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7730
Fax: (860) 513-7614

Springwich Cellular Limited Partnership

Peter W. van Wilgen
Director - Real Estate Operations

November 9, 1999

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: Request by Springwich Cellular Limited Partnership for an Order to Approve the Shared Use of a Tower Facility located at 21 Acorn Road, Branford, Connecticut.

Dear Chairman Gelston:

Pursuant to Connecticut General Statutes (C.G.S.) Section 16-50aa, Springwich Cellular Limited Partnership ("SCLP" or "Applicant") hereby requests an order from the Connecticut Siting Council ("Council") to approve the proposed shared use by the Applicant of an existing tower facility located at 21 Acorn Road in Branford, Connecticut. The property is owned by Alfred Secondino, from which Sprint Spectrum L.P. ("Sprint") leases property for the tower facility. Sprint owns and operates the tower.

As shown on the attached drawings and as further described below, SCLP proposes to install antennas on the existing tower and to place its equipment in a 12' x 26' storage room in a building currently under construction by Mr. Secondino.

The Applicant requests that the Council find that the proposed shared use of the tower facility satisfies the criteria stated in C.G.S. § 16-50aa, and to issue an order approving the proposed use. A copy of this letter is being sent to the First Selectman of the Town of Branford.

Background

Springwich Cellular Limited Partnership is licensed by the Federal Communications Commission ("FCC") to provide cellular telephone service in the New Haven New England County Metropolitan Area ("NECMA"), which includes the area to be served by the Applicant's proposed installation.

The Sprint facility is located off Exit 56 on Interstate 95, at 21 Acorn Road, Branford, Connecticut on which is located at 150' monopole and three Sprint equipment cabinets

located at the base of the monopole. The monopole presently supports both Sprint and Nextel antennas, which provide wireless telecommunication service to the public pursuant to their FCC licenses. The Applicant and Sprint have agreed to the proposed shared use of this tower pursuant to mutually acceptable terms and conditions. Sprint has authorized the Applicant to apply for all necessary permits, approvals and authorizations, which may be required, for the proposed shared use of this facility. Nextel received Council approval for tower sharing on this facility on August 16, 1999.

SCLP proposes to install nine (9) Allgon Model 7120.16 antennas, approximately 52 inches in height, on a third antenna platform with the center of radiation at approximately 105' above ground level ("AGL").

Statutory Considerations. C.G.S. § 16-50aa provides that, upon written request for approval of a proposed shared use, "if the Council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the Council shall issue and order approving such shared use." (C.G.S § 16-50aa(c)(1).

The shared use of the tower satisfies the criteria in C.G.S § 16-50aa as follows:

A. **Technical Feasibility.** The existing tower is structurally sound and capable of supporting the proposed shared use the proposed SCLP antennas as well as Nextel's antennas at the 130' level. The proposed shared use of this tower is therefore technically feasible.

B. **Legal Feasibility.** Under C.G.S § 16-50aa, the Council has been authorized to issue an order approving the proposed shared use of an existing tower facility such as the facility located on 21 Acorn Road in Branford. (C.G.S § 16-50aa(c) (1). This authority complements the Council's prior-existing authority under C.G.S § 16-50p to issue orders approving the construction of new towers that are subject to the Councils jurisdiction. C.G.S § 16-50x(a) directs the Council to "give such consideration to other state laws and municipal regulations as it shall deem appropriate" in ruling on requests for the shared use of existing tower facilities. Under the authority vested in the Council by C.G.S § 16-50aa, an order approving the shared use would permit the Applicant to obtain a building permit for the proposed installation.

C. **Environmental Feasibility.** The proposed shared use of this tower facility would have a minimal environmental effect for the following reasons:

1. The proposed installation would have an insignificant incremental visual impact and would not cause any significant change or alteration in the physical or environmental characteristics of the property. The addition of the proposed antennas would not increase the height of the tower. SCLP's equipment will be housed in the property owner's storage building.

2. The proposed installation would not increase noise levels at the existing facility by six decibels or more.

3. Operation of the additional antennas at this site will not increase the total radio frequency electromagnetic radiation power density levels adopted by the State of Connecticut and the FCC as shown below. "Worst-case" exposure calculations for a point of interest at the base of the tower in relation to operation of the SCLP, Nextel and Sprint's antenna arrays are as follows:

FREQUENCY	POWER DENSITY	HEIGHT	STANDARD LIMITS (mW/cm2)	% OF STANDARD
Sprint PCS 1962.5	0.0214	150'	1.0000	2.14%
Nextel 851	0.0191	130'	0.5673	3.37%
SCLP (proposed) 880-894	0.0705	105'	0.5867	12.02%
TOTAL	N/A		N/A	17.53%

As the table demonstrates, The collective "worst-case" exposure would be only 17.53% of the ANSI/IEE standard, as calculated for mixed frequency sites. Power density levels from shared use of the tower facility would thus be well below applicable ANSI/IEE standards.

4. The proposed installation would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is completed (approximately four weeks), the proposed installation would not generate any vehicular traffic other than periodic maintenance visits. The proposed use of the facility would therefore have a minimal environmental effect, and is environmentally feasible.

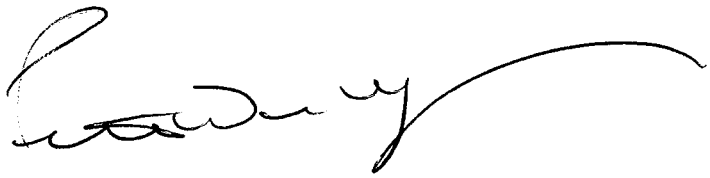
D. **Economic Feasibility.** SCLP has entered into an agreement with Sprint and the property owner to share use of the tower and the new storage building. The proposed facility sharing is therefore economically feasible.

E. **Public Safety Concerns.** As stated above, the existing tower is structurally capable of supporting the Applicant's proposed antennas and fall well below State and Federal Standards. The Applicant is not aware of any other public safety concerns relative to the proposed sharing of the tower. In fact, the provision of new or improved wireless coverage in the area is expected to enhance the safety and welfare of Branford residents. The proposed-shared use of this facility would improve public safety along I-95 in the Town of Branford.

Conclusion

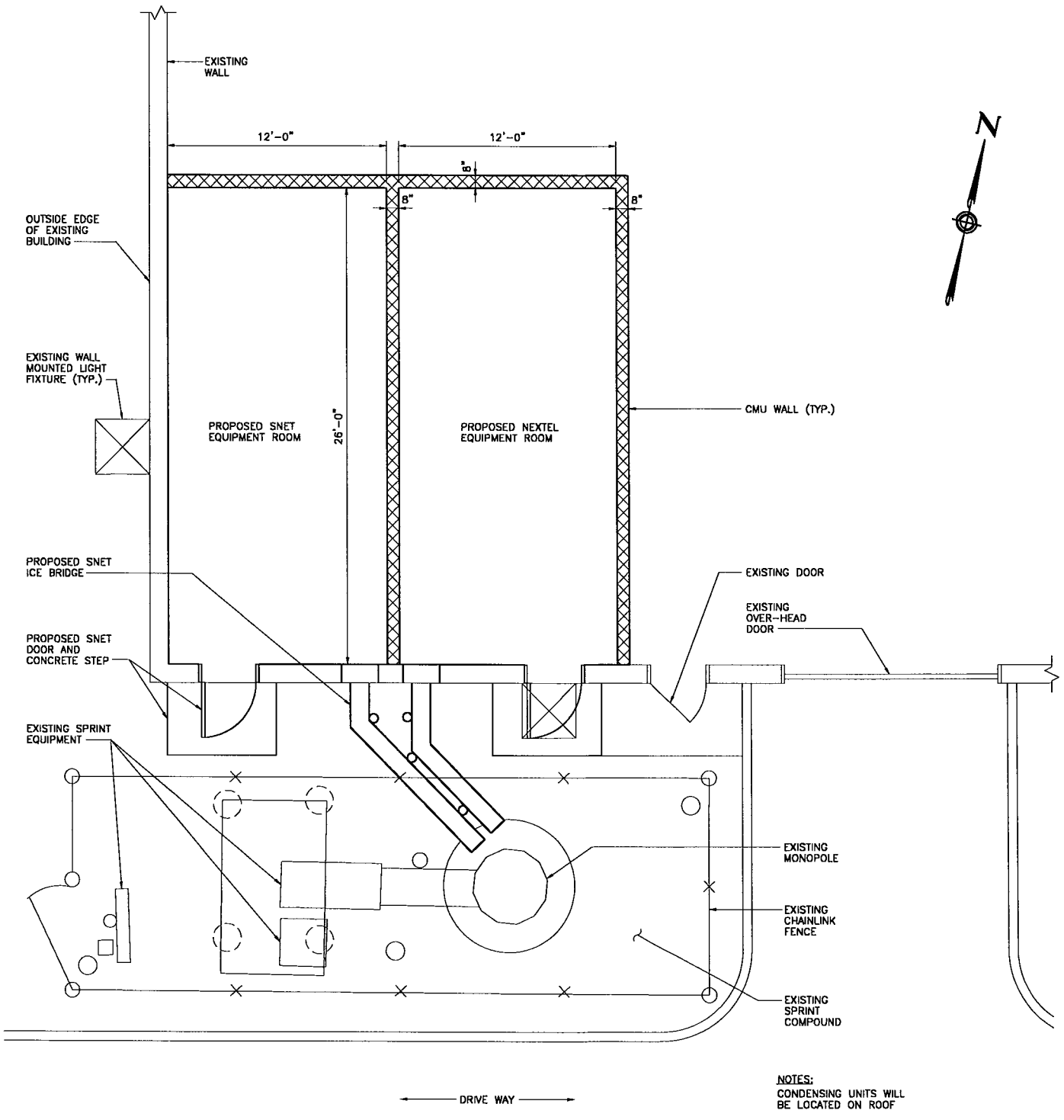
For the reasons discussed above, the proposed shared use of the existing tower facility at 21 Acorn Road in Branford satisfies the criteria stated in C.G.S. § 16-50aa and advances the General Assembly's and the Council's goal of preventing the proliferation of tower in Connecticut. The Applicant therefore respectfully requests that the Council issue on order approving the proposed shared use.

Sincerely,



cc: Honorable Anthony P. DaRos, First Selectman
Kenneth Mac Master Sprint PCS

Attachments



1 / L-2 PARTIAL SITE/FLOOR PLAN

SCALE: 1/8" = 1'-0"

SITE ID NO:	URS Greiner Woodward Clyde A-E-S 500 ENTERPRISE DRIVE ROCKY HILL, CONNECTICUT 1-(860)-529-8882	SPRINGWICH CELLULAR LIMITED PARTNERSHIP WIRELESS COMMUNICATIONS FACILITY
Designed by:		
Drawn by: CRS		SITE ADDRESS: SECONDINO & SON, Inc. ACORN ROAD BRANFORD, CT
Checked by:		
Approved by:		

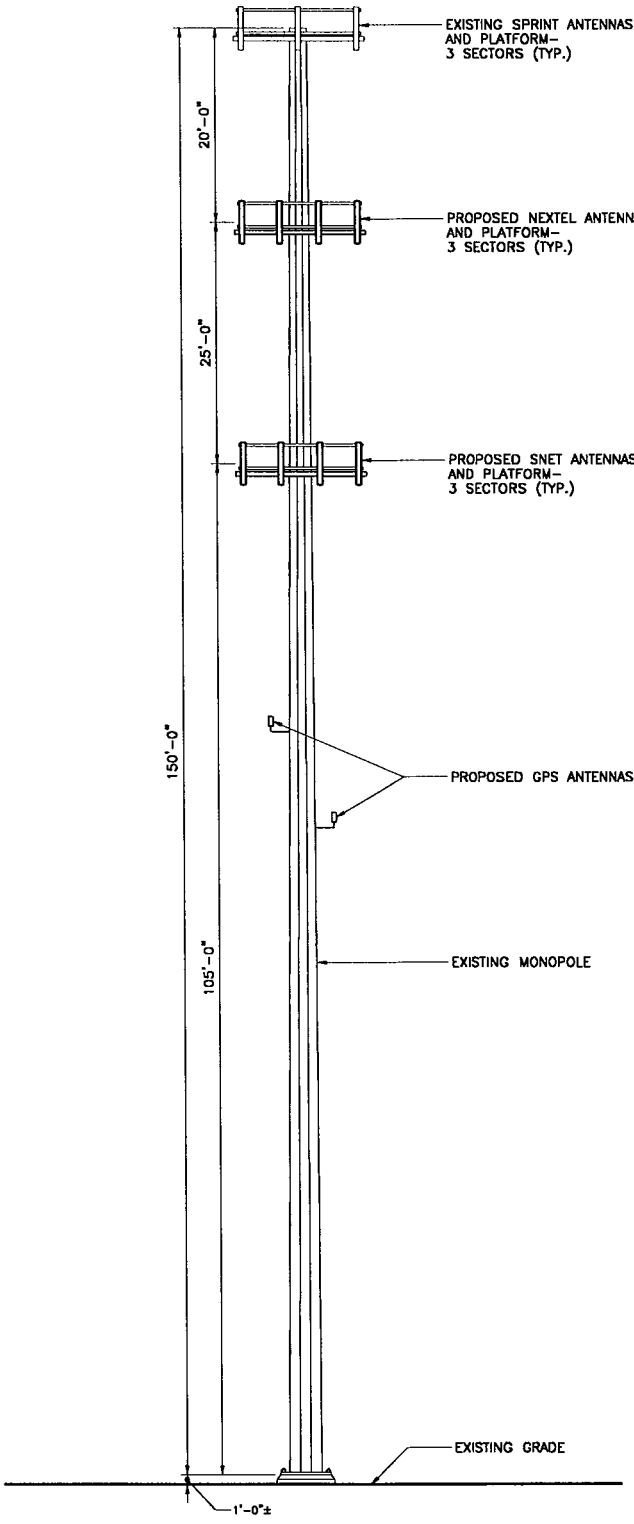
REV.	DATE:	DESCRIPTION

Scale: AS NOTED | Date: 10-21-99

Job No.F301804.37 | File No. L-2

Dwg. No. L-2

Dwg. 2 of 3



1/L-3 TOWER ELEVATION

SCALE: 1" = 20'-0"

SITE ID NO:	URS Greiner Woodward Clyde A-E-S	SPRINGWICH CELLULAR LIMITED PARTNERSHIP
Designed by:	500 ENTERPRISE DRIVE	WIRELESS COMMUNICATIONS FACILITY
Drawn by: CRS	ROCKY HILL, CONNECTICUT	SITE ADDRESS: SECONDINO & SON, Inc.
Checked by:	1-(860)-529-8882	ACORN ROAD
Approved by:		BRANFORD, CT

REV.	DATE:	DESCRIPTION

Scale: AS NOTED | Date: 10-21-99 | Job No.F301804.37 | File No. L-3

Dwg. No. L-3

Dwg. 3 of 3