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
www.ct.gov/csc

May 20, 2004

Thomas F. Flynn III
Nextel Communications Inc.
100 Corporate Place
Rocky Hill, CT 06067

RE: **EM-NEXTEL-066-040511** - Nextel Communications, Inc. notice of intent to modify an existing telecommunications facility located at 123 Campville Road, Harwinton, Connecticut.

Dear Mr. Flynn:

At a public meeting held on May 19, 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 with the condition that the recommendations on page 5 of the structural analysis report prepared by Miguel Nobre, P.E. be implemented prior to the antenna installation.

The proposed modifications are to be implemented as specified here and in your notice dated May 10, 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 Marie M. Knudsen, First Selectman, Town of Harwinton
William J. Tracy, Jr., Planning Chairman, Town of Harwinton
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae LLP
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Kenneth C. Baldwin, Esq., Robinson & Cole LLP

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May 12, 2004

Honorable Marie M. Knudsen
First Selectman
Town of Harwinton
100 Bentley Drive
Harwinton, CT 06791

RE: **EM-NEXTEL-066-040511** - Nextel Communications, Inc. notice of intent to modify an existing telecommunications facility located at 123 Campville Road, Harwinton, Connecticut.

Dear Ms. Knudsen:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for May 19, 2004 at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/cm

Enclosures (2): Notice of Intent
Agenda

c: William J. Tracy, Jr., Planning Chairman, Town of Harwinton

EM-NEXTEL-066-040511

el Communications
Corporate Place, 1st Floor, Rocky Hill, CT 06067
513-5400 FAX 860 513-5444

NEXTEL

May 10, 2004

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

Dear Chairman Katz:

Please find enclosed and respectfully submitted, a request from Nextel Communications Inc. ("Nextel") to Modify an Exempt Tower and Associated Equipment at an existing telecommunications facility located on 123 Campville Road, Harwinton, Connecticut. This facility is located on property owned by the Harwinton Rod & Gun Club Inc.. The tower is owned by Sprint PCS.

Nextel wishes to share use of this facility in order to improve/expand wireless its system coverage and to avoid the possibility of constructing another telecommunications tower in the general area.

The attached information details how the addition of the proposed antennas and associated equipment at the tower site meet the criteria set forth in Section 16-50j-72(b)(2) of the Regulations of Connecticut State Agencies and therefore is an Exempt Modification pursuant to Section 16-50j-73 of the Regulation.

Thank you for your consideration in this matter.

Respectfully,

Thomas F. Flynn III
Zoning Coordinator
Nextel Communications

Enclosure

Cc: First Selectman
Marie Knudsen

EXEMPT MODIFICATION
123 CAMPVILLE ROAD
HARWINTON, CONNECTICUT 06791

Pursuant to Section 16-50i(a)(5) of the Connecticut General Statutes and Section 16-50j-72(b)(2), as amended, of the Regulations of Connecticut State Agencies, Nextel Communications Inc., ("Nextel") hereby notifies the Connecticut Siting Council of its intent to modify an existing telecommunications facility located at 123 Campville Road, Harwinton, Connecticut.

BACKGROUND

This existing facility, located at 123 Campville in Harwinton, Connecticut consists of a 177-foot tall monopole that is owned by Sprint PCS and is located on property of the Harwinton Rod & Gun Club Inc. Sprint PCS, T-Mobile, Verizon and AT&T Wireless are currently using the site. The site will provide wireless service coverage for Nextel to this section of Harwinton, Litchfield, Routes 8 and 222.

Nextel desires to share use of this facility and thus avoid the potential need to construct an additional tower in the general area.

DISCUSSION

Nextel plans to install twelve (12) panel antennas center-lined at the 137-foot level of the tower (see Attachment A) and place a 12-foot by 20-foot equipment shelter inside the northeastern side of the existing fenced compound (see Attachment B). The tower has been structurally analyzed and found to be fully capable of supporting Nextel's antennas and its tower mounted hardware (Attachment C). The tower is located at latitude 41 44 13.76 and longitude 73 05 52.50.

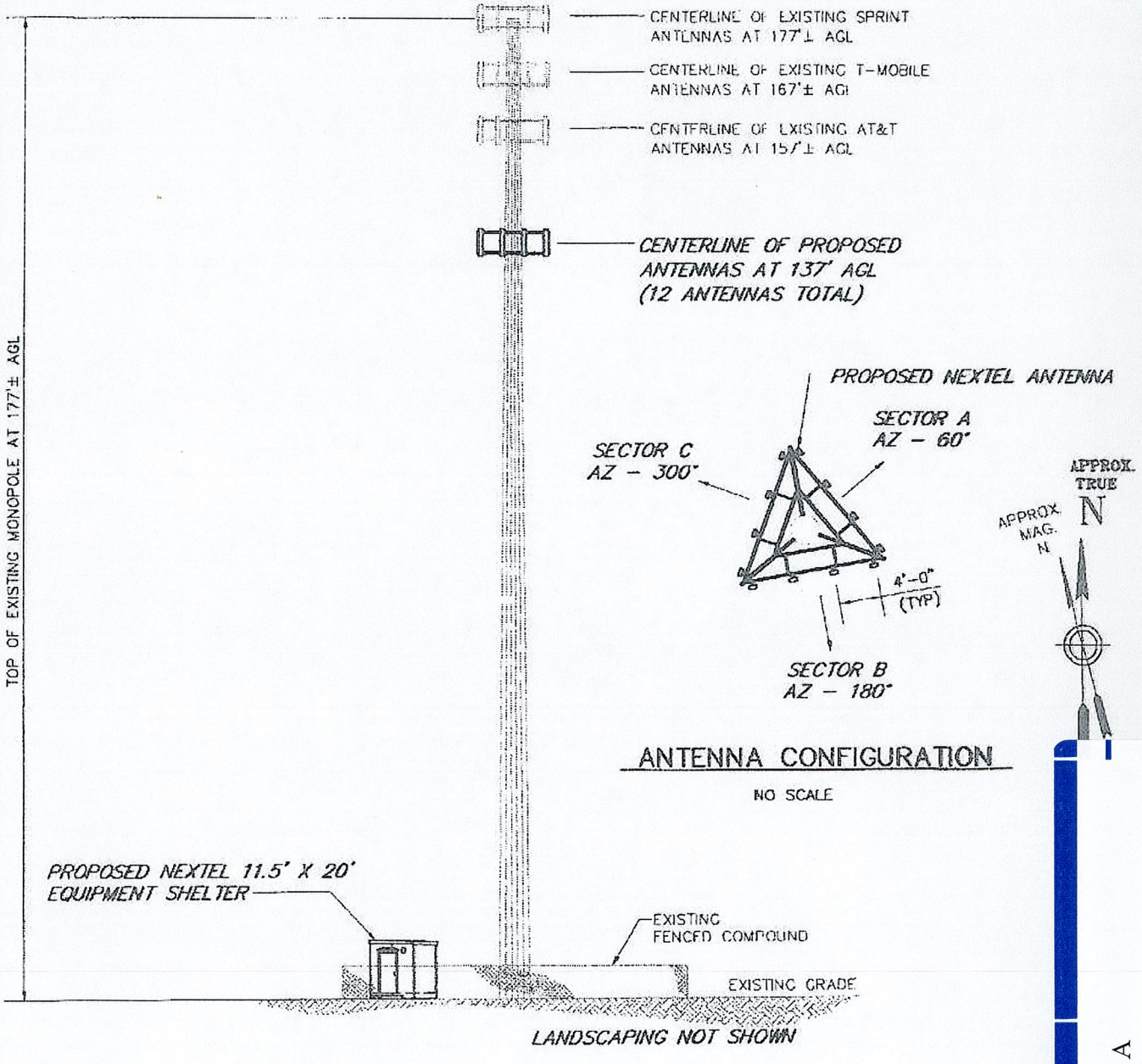
POWER DENSITY INFORMATION

The operation of Nextel's antennas will not increase the total radio frequency electromagnetic power density level to a level at (or even near) existing State and Federal Standards. "Worst case" calculations, measured to a point at the base of the tower, show the power levels for the existing Sprint PCS, T-Mobile, AT&T Wireless, Verizon and the proposed Nextel antennas reach just 23.6774 % of the State/Federal standard in an uncontrolled access environment. (See Attachment D).

CONCLUSION

The proposed additions do not constitute a "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and are consistent with the exception criteria found in Section 16-50j-72(b)(2) of the Regulations of Connecticut State Agencies in that the addition of Nextel's antennas and equipment will not increase the existing tower height or extend the boundaries of the site; will not increase noise levels by six (6) decibels or more at the site's boundaries; and will not increase the total radio frequency electromagnetic radiation above the Standard set forth in Section 22(a)–162 of the Connecticut General Statutes. In summary, this proposed addition would not have a substantial adverse environmental effect.

For the reasons discussed above, Nextel respectfully requests that the Council acknowledge that this Notice of Modification meets the Council's exemption criteria, and permit Nextel to share use of this facility.



ANTENNA CONFIGURATION

NO SCALE

SITE ELEVATION

NO SCALE

ATTACHMENT A

SPECIAL DESIGN NOTES:
WIRELESS CARRIER PROPOSES A TOTAL OF 12 ANTENNAS AND 2 GPS ANTENNAS WITH THIS INSTALLATION.

THE DESIGN OF THE COMPOUND AS SHOWN IS PRELIMINARY AND MUST COMPLY WITH A STANDARD SET FORTH BY ALL STATE AND MUNICIPAL BUILDING CODES AND ZONING REGULATIONS INCLUDING VARIANCES.

CHA
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CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
2139 SILAS DEANE HIGHWAY
ROCKY HILL, CT 06067

NEXTEL COMMUNICATIONS

GENERAL DYNAMICS
Wireless Services
77 "A" STREET
NEEDHAM HEIGHTS, MA. 02494-2808

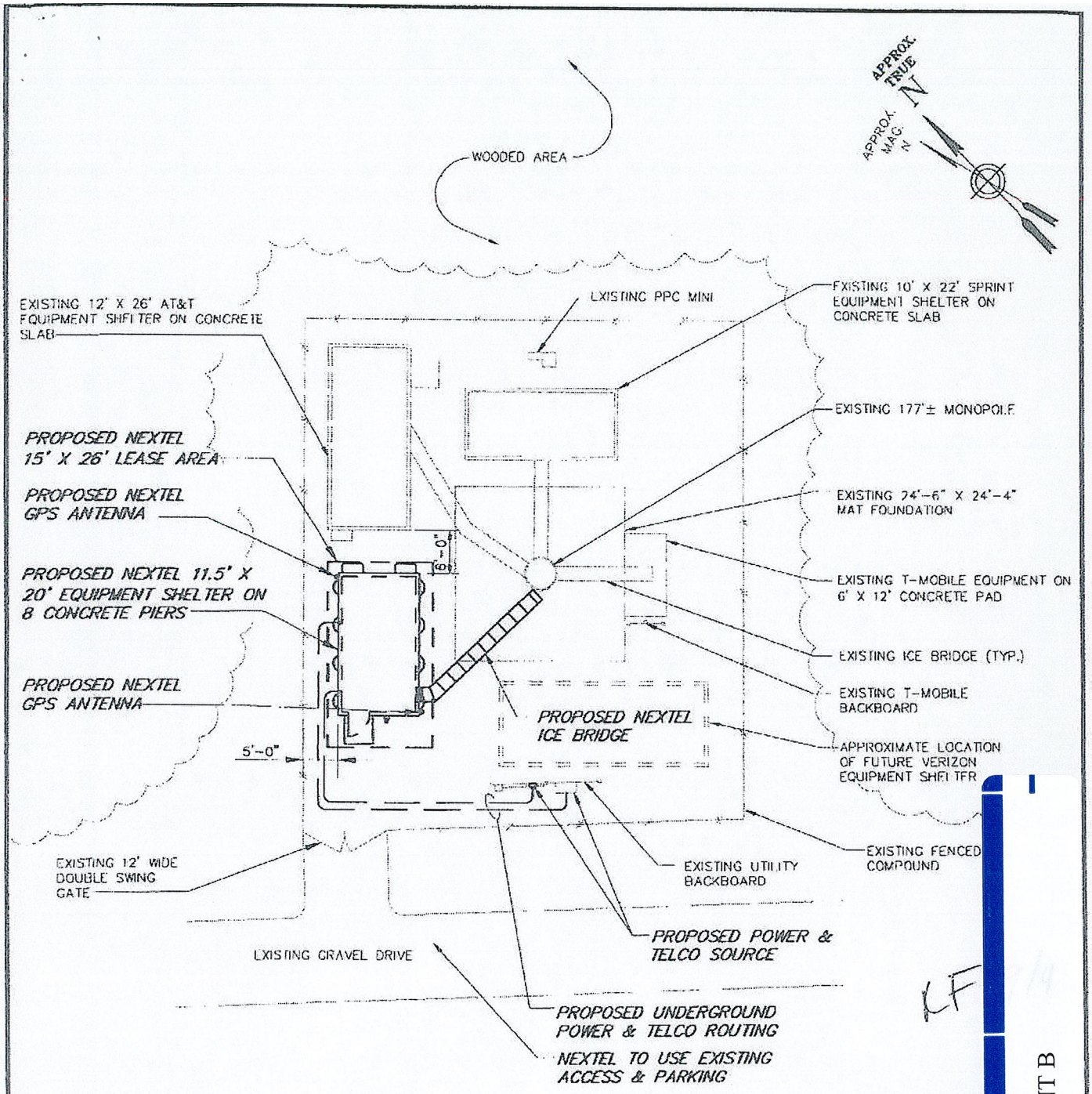
CT3652
LITCHFIELD EAST
123 CAMPVILLE HILL ROAD
HARWINTON, CT 06791

CHA PROJ. NO. – 12604-1002

2 OF 2

REV 1

LE-2



SITE PLAN

GRAPHIC SCALE

20 0 10

IN FEET

ATTACHMENT B

SPECIAL DESIGN NOTES:
WIRELESS CARRIER PROPOSES A TOTAL OF 12 ANTENNAS AND 2 GPS ANTENNAS WITH THIS INSTALLATION.

THE DESIGN OF THE COMPOUND AS SHOWN IS PRELIMINARY AND MUST COMPLY WITH A STANDARD SET FORTH BY ALL STATE AND MUNICIPAL BUILDING CODES AND ZONING REGULATIONS INCLUDING VARIANCES.

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HARWINTON, CT 06791

CHA PROJ. NO. – 12604-1002

1 OF 2

REV 1

LE-1

File: E:\12604\1002\Lease Exhibit\CT3652_LE1.dwg User: 1013 8/25/2003 01:24 PM

Vertical Resources Group, Inc.

March 13, 2004

Mr. Bill Hinckley
Construction Supervisor
NEXTEL / General Dynamics Wireless
77 "A" Street
Needham Heights, MA
02494-2806

SUBJECT: Structural Analysis
Existing 180' Self Support Monopole
Litchfield, CT
Site ID: CT3652
Our File : 40-133

Dear Mr. Hinckley,

We have completed the analysis of the existing 180' self support monopole in Litchfield, CT and are pleased to submit our report for your attention.

The tower analysis was undertaken on behalf of a General Dynamics notice to proceed dated March 11, 20034

We trust the analysis and recommendations presented in this report will meet your requirements. However, please do not hesitate to contact us if you have any queries, or require any further information regarding this study.

Yours very truly,

Miguel Nobre,Eng.

ATTACHMENT C

Vertical Resources Group, Inc.
420 Boston Turnpike, Suite 408 - Shrewsbury, MA 01545
P: 508-981-9590 F: 508-519-8939

Preface

At the request of General Dynamics, we have analyzed the existing 180' self support monopole, located in Litchfield, CT for the proposed antenna and tx-line loading.

The existing 180' monopole is comprised of 65 Ksi bent plate having a bottom diameter of 52" and a top diameter of 22.2". It is comprised of four sections varying in thickness from 1/2" at the bottom to 1/4" at the summit all slip jointed one through the next.

The existing pole was originally designed by an unknown company, it has not been studied for hazard to air flight navigation and it is not registered with the FCC.

Documents Examined

Tower profile and member details	• Tower climb and survey by Miguel Nobre of VRG dated March 8, 2004
Discrete and line Appurtenances	• Tower climb and survey by Miguel Nobre of VRG dated March 8, 2004.
Additional antenna loading	• Additional antenna loading specifications as per Bill Hinckley of GD e-mail dated March 9, 2004.

Design Parameters

Design Standard:	TIA/EIA – 222 – F, ASCE 7-98, BOCA National Building Code 1999, AISC ASD 9th Edition, ACI 318-99.
Ref. Wind Velocity	80 Mph (Litchfield County)
Radial ice:	0.5"ϕ
Wind Loading Conditions	1 - 80 mph with no ice 2 - 69.3 mph with 0.5"ϕ radial ice
Importance factor	1.0
Allowable Stress Increase	4/3 (ASD 9TH Edition Section A5.2)

Design Assumptions

The present report assumes the following information:

1- The tower is in good, undamaged and non-corroded condition
2- Tower anchor bolts are assumed to be of ASTM A615 Grade 75.

In the event that any of these assumptions are incorrect we will need to be notified immediately in order to revise the results and recommendation herein.

Existing and Proposed Antennas

The following existing and proposed antenna loading is per site visit by Miguel Nobre dated March 8, 2004.

ANTENNA	ELEVATION	ORIENTATION	TX-LINE	CARRIER	NOTE
(6) DB980H90EMS	180' (cent. ant.)	50°, 170°, 310°	(6) 1 5/8	Sprint	Antennas mounted on low profile platform.
(3) EMS RR651800DP	168' (cent. ant.)	50°, 170°, 310°	(6) 1 5/8	T-Mobile	Antennas mounted on low profile platform.
(6) Allgon 7143.26	157' (cent. ant.)	50°, 170°, 310°	(6) 1 5/8	AT&T	Antennas mounted on low profile platform.
(3) Allgon 7250	157' (cent. ant.)	50°, 170°, 310°	(3) 1 5/8	AT&T	Antennas mounted on low profile platform.
(12) DB950F85	147' (cent. ant.)	50°, 170°, 310°	(12) 1 5/8	Verizon	Antennas mounted on low profile platform.
(12) DB844H90	137' (cent. ant.)	50°, 170°, 310°	12) 1 5/8	Nextel	Antennas mounted on low profile platform.

All elevations are measured from ground level. Items in bold indicate proposed loading under the present report.

Existing and Proposed Appurtenance Loading

	Velocity Pressure Coefficient q_z	Gust Response Factor G_H	Appurtenance Force Coefficient C_A	Discrete appurtenance A_C (bare)	Discrete appurtenance A_C (iced)
DB980H90EMS	26.6	1.69	1.4	2.50 Ft^2	2.97 Ft^2
EMS RR651800DP	26.1	1.69	1.4	3.11 Ft^2	3.57 Ft^2
Allgon 7143.26	25.6	1.69	1.4	5.74 Ft^2	6.32 Ft^2
Allgon 7250	25.6	1.69	1.4	2.34 Ft^2	2.75 Ft^2
DB950F85	25.1	1.69	1.4	2.50 Ft^2	2.97 Ft^2
DB844H90	24.6	1.69	1.4	2.83 Ft^2	3.23 Ft^2

Analysis Method

The existing tower was analyzed using a comprehensive finite element analysis computer program titled "PLS-POLE". A non-linear analysis considering P-Delta effects is utilized therefore ensuring that all forces and moments are in equilibrium with the structure deformed shape.

Section 15.1 of EIA-222-F stipulates that when there is a change in antennas, transmission lines, appurtenances, in operational requirements, an increase in wind or ice loading a structural analysis as per the latest version of the code is required.

The monopole tower is assumed to be in good, undamaged and non-corroded condition. The analysis allowed a 5 percent over-stress due to design variance. The monopole shaft is of twelve sided 65ksi yield stress steel plate. The present analysis is in accordance with EIA/TIA Standard 222-F.

Results

Tower as is without additional antennas

Elevation (ft)	Pole Shaft
180.0	0.5% capacity
131.5 – 180	11.1% capacity
87.0 – 131.5	36.0% capacity
43.0 – 87.0	50.9% capacity
0.0 – 43.0	73.2% capacity
0.0	99.9% capacity

Tower as is with Nextel antennas and coaxial cables

Elevation (ft)	Pole Shaft
180.0	0.9% capacity
131.5 – 180	12.2% capacity
87.0 – 131.5	46.5% capacity
43.0 – 87.0	73.2% capacity
0.0 – 43.0	**5.5% over stress**
0.0	**57% over stress**

Foundations

(without additional antennas)

Base Loads:

Down Load	35.5 kips
Shear	14.6 kips
Overturning moment	1400.9 kip*ft

- Assuming the existing 16- 2 1/4"ø anchor bolts are of ASTM A615 Gr75 material they are adequate for supporting the loads ensuing from the existing antenna loading.
- Assuming the existing 71"x71"x2.75" base plate consists of ASTM A572 Gr55 material it is adequate for supporting the applied loads resulting from the existing antennas.

(with proposed Nextel antennas)

Base Loads:

Down Load	32.8 kips
Shear	24.3 kips
Overturning moment	2165.4 kip*ft

- Assuming the existing 16- 2 1/4"ø anchor bolts are of ASTM A615 Gr75 material they are not adequate for supporting the loads ensuing from the addition of Nextel antennas.
- Assuming the existing 71"x71"x2.75" base plate consists of ASTM A572 Gr55 material it is not adequate for supporting the applied loads resulting from the addition of Nextel antennas.

Conclusion

Based on the aforementioned results it is consistent to confirm that the existing tower in its present configuration and under the proposed loading is not in conformance with the requirements of TIA/EIA-222-F for a reference wind velocity of 80 mph with ½" radial ice.

Recommendation

To install the proposed NEXTEL antennas and associated transmission lines the recommendations outlined herein should be implemented:

1- Eliminate pole shaft over stresses from 0' to 60' by reinforcing monopole cross section with either a bolt-on section or new I-beams clamped to the monopole exterior.

2- We recommend the foundation type and size be determined and a comprehensive soils investigation be performed so as to adequately establish the structural adequacy of the existing foundations

Yours very truly,

Miguel Nobre,P.Eng

Harwinton, CT (Campville Hill Rd.) - CT Siting Council Power Density Calculations

Nextel Directional Antennas ESMR - 851 MHz at centerline 137' AGL

Note: Power densities are in mW/ cm²

Transmitters:	Frequency in MHz	CT Standard mW/ cm²	Number of Channels	ERP (W) per channel	Centerline of Tx antennas AGL (ft.)	Power density calculated at base of tower	% of CT Standard
Sprint from AT&T filing	1962	1.0000	12	500	177	0.068830796	6.8831%
T-Mobile from AT&T filing	1935	1.0000	12	250	167	0.038660404	3.8660%
AT&T from prior filing	880	0.5867	12	250	157	0.04374214	7.4560%
Verizon	1900	1.0000	3	285	147	0.014220325	1.4220%
Nextel Digital ESMR - Proposed	851	0.5673	12	100	137	0.022978315	4.0502%
Total % of CT Standard							23.6774%

ATTACHMENT D