

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

Web Site: www.ct.gov/csc

March 9, 2004

Stephen J. Humes
LeBoeuf, Lamb, Greene & MacRae
Goodwin Square
225 Asylum Street
Hartford, CT 06103

RE: **EM-T-MOBILE-066-040225** – Omnipoint Communications, Inc. notice of intent to modify an existing telecommunications facility located at 133 Clearview Avenue, Harwinton, Connecticut.

Dear Attorney Humes:

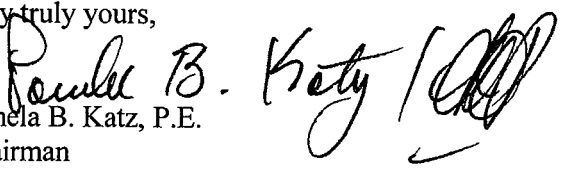
At a public meeting held on March 4, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated February 25, 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
Sheila R. Becker, Regional Director of Compliance, SBA, Inc.
Thomas F. Flynn III, Nextel Communications, Inc.

LEBOEUF
LAMB,
GREENE &
MACRAE, LLP*

Goodwin Square
225 Asylum Street, 13th Floor
Hartford, CT 06103
Tel: (860) 293-3500
Fax: (860) 293-3555

FAX
TRANSMISSION

TRANSMISSION PROBLEMS: (860) 293-3722

FROM: Roger J. Cirella	ID#: 5344	DATE: March 4, 2004
TEL: (860) 293-3722	PAGES: 1 of 3	CLIENT/MATTER NO.: 07687-00307

TO:	COMPANY:	FAX NO.:	CONFIRMING TELEPHONE NO.:
Mike Perrone	Connecticut Siting Council	(860) 827-2950	(860) 827-2943

Comments/Message:

CT11-712 Harwinton Exempt Mod-RF Memo

Mike,

Please let me know if you have any questions. Thanks.

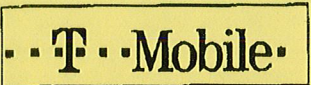
Roger

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MAR - 4 2004

CONNECTICUT
SITING COUNCIL

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T-Mobile USA Inc.
 100 Filley St, Bloomfield, CT 06002-1853
 Phone: (860) 692-7100
 Fax: (860) 692-7159

Technical Memo

To: Maric Burbank
 From: Jeeendra Ghare - Radio Frequency Engineer
 cc: Overbey Jason
 Subject: Power Density Report for CT11712A
 Date: March 3, 2004

1. Introduction:

This report is the result of an Electromagnetic Field Intensitics (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a Monopole at 133 Clearview Avenue, Harwinton, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

- 1) The emissions from T-Mobile transmitters are in the 1935-1945 MHz frequency band.
- 2) The antenna array consists of three sectors, with 4 antennas per sector.
- 3) The model number for each antenna is EMS RR90-17-02DP.
- 4) The antenna center line height is 193 ft.
- 5) The maximum transmit power from any sector is 3146.01 Watts Effective Radiated Power (EIRP) assuming 8 channels per sector.
- 6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile PCS antenna installation on a Monopole at 133 Clearview Avenue, Harwinton, CT, is 0.01974 mW/cm². This value represents 1.974% of the Maximum Permissible Emission (MPE) standard of 1 milliwatt per square centimeter (mW/cm²) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.

The combined Power Density from other carriers is 2.5017%. The combined Power Density for the site is 4.475% of the M.P.E. standard.

T-Mobile

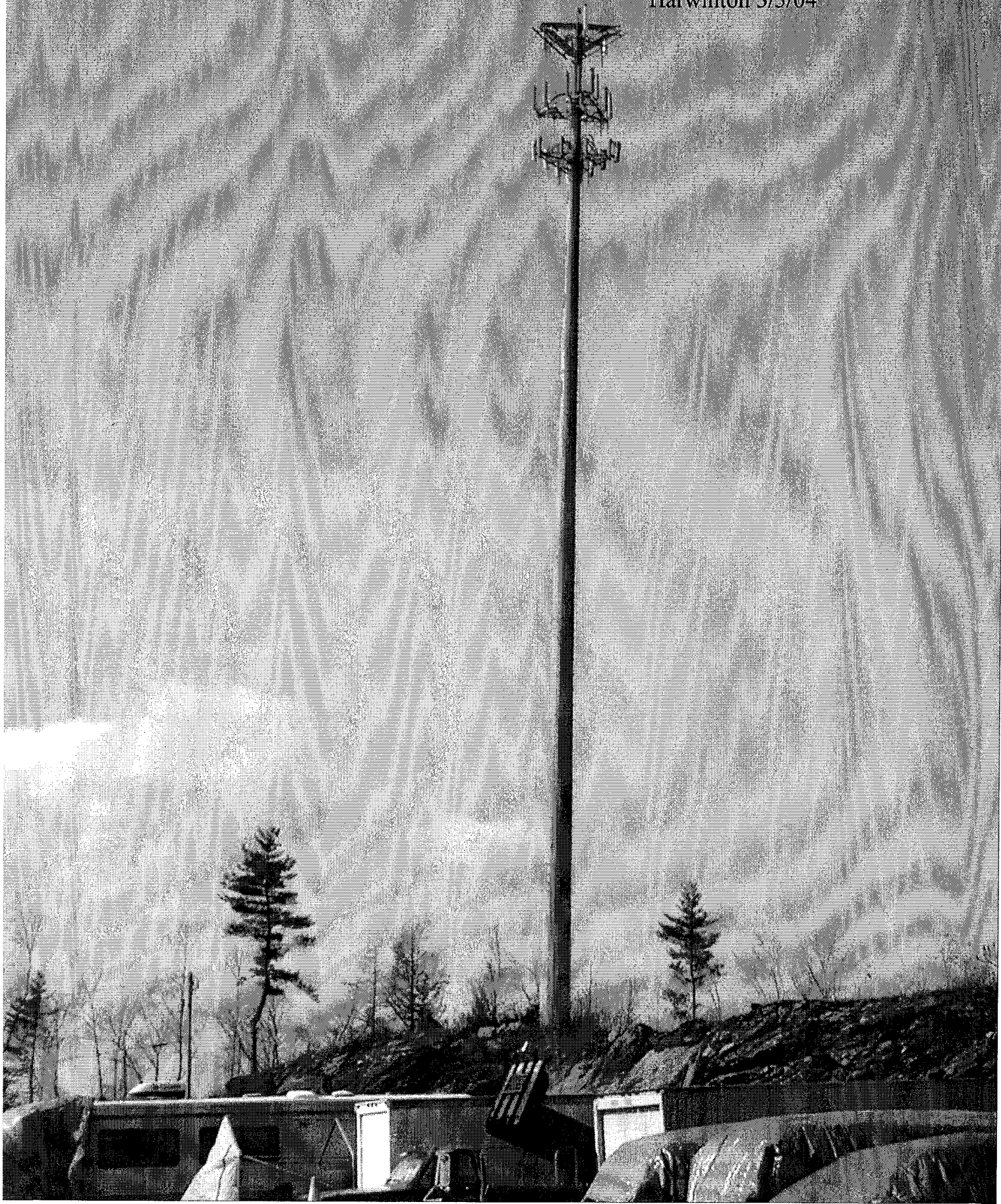
Site Address:	11200 S
Tower Height:	112.0 ft
Tower Style:	Monopole
Base Station Output	20 W
Number of Channels:	8
Antenna Model:	EMS RR90-17-02DP
Cable Size:	1.576 in
Cable Length:	221 ft
Antenna Height:	193.0 ft
Ground Reflection:	1.6
Frequency:	1935.0 MHz
Jumper & Connector loss:	1.00 dB
Antenna Gain:	16.5 dBi
Cable Loss per foot:	0.0116 dB
Total Cable Loss:	2.5636 dB
Total Attenuation:	3.5636 dB
Total EIRP per Channel	55.95 dBm
(In Watts)	393.25 W
Total EIRP per Sector	64.98 dBm
(In Watts)	3146.01 W
neg	12.9364
Power Density (S) =	0.019738 mW/cm²
T-Mobile USA Worst Case % MPE =	1.9738%

Equation Used:

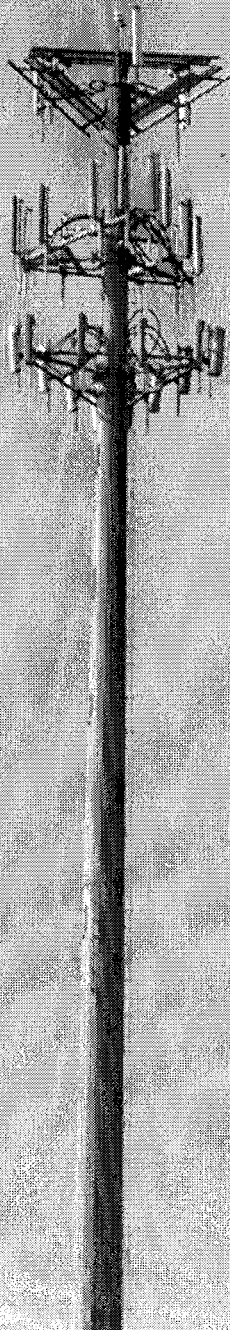
$$S = \frac{(1000(\text{grf})^2 (\text{Power}) 10^{(\text{neg}/10)})}{4\pi (R)^2}$$

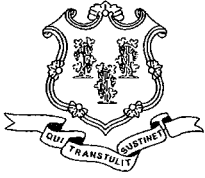
Total Excluding T-Mobile USA	2.5017%
T-Mobile USA	1.9738%
Total % MPE for Site	4.4755%

EM-T-MOBILE-066-040225
133 Clearview Avenue
Harwinton 3/3/04



EM-T-MOBILE-066-040225
133 Clearview Avenue
Harwinton 3/3/04





STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Web Site: www.ct.gov/csc

February 27, 2004

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

RE: **EM-T-MOBILE-066-040225** – Omnipoint Communications, Inc. notice of intent to modify an existing telecommunications facility located at 133 Clearview Avenue, Harwinton, Connecticut.

Dear Ms. Knudsen:

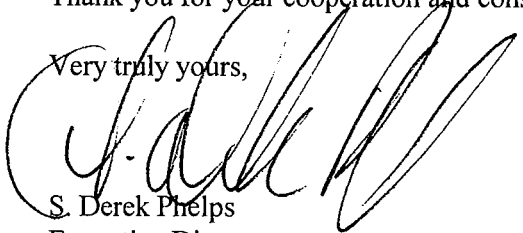
The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for Thursday, March 4, 2004 at 1:30 p.m. in Hearing Room Two, 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/laf

Enclosure: Notice of Intent

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

LEBOEUF, LAMB, GREENE &
L.L.P.

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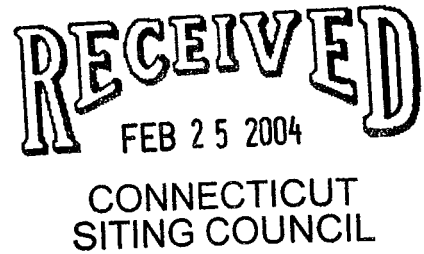
BISHKEK

ALMATY

BEIJING

February 25, 2004

Pamela Katz, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051



Re: Notice of Exempt Modification
133 Clearview Avenue Harwinton, Connecticut

Dear Chairman Katz and Members of the Council:

Please be advised that LeBoeuf, Lamb, Greene & MacRae, L.L.P. represents Omnipoint Communications, Inc., a subsidiary of T-Mobile USA, Inc. (hereinafter T-Mobile) in the above-referenced matter. T-Mobile intends to add nine antennas for a total of twelve antennas mounted on an existing platform on the existing monopole tower facility at 133 Clearview Avenue in Harwinton. Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction that 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 Selectman of Harwinton, Marie M. Knudsen.

Background

T-Mobile holds the "A block" "Wideband PCS" license for the 2-GHz PCS frequencies for the greater New York City area, including the entire State of Connecticut. T-Mobile is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telecommunications service in the State of Connecticut, which includes the area to be served by the proposed installation.

Discussion

The existing facility consists of a one hundred ninety-five foot (195') monopole tower (see Nextel Application attached as Exhibit A) and surrounding compound. The coordinates for the site are **Lat: 41°-46-32** and **Long: 73°-05-55.05**. The tower is in the northwest corner of Harwinton. The tower is approximately one thousand five hundred seventy feet (1,570') east of Scoville Hill Road and roughly one thousand three hundred ninety-nine feet (1,399') south of Lower Bogue Road.

In discussions with David Martin of the Connecticut Siting Council, T-Mobile was advised that this notification letter with a reference to the Nextel Application which was submitted on October 10, 2003 and approved on November 3, 2003 would provide the necessary notification since the Nextel Application approved by the Siting Council already lists T-Mobile with twelve (12) antennas on the existing tower facility. The installation of the T-Mobile antennas was approved locally.

T-Mobile now proposes to add nine (9) antennas to the existing three (3) antenna array, creating a total of twelve (12) antennas. The proposed configuration is a cluster of three sectors mounted on an existing low profile platform at the one hundred ninety-five foot (195') centerline above ground level ("AGL"). The model number for the new antennas is RR90-17-00DP. Currently, there is one (1) S-8000 equipment cabinet. T-Mobile intends to add two (2) S-8000 equipment cabinets for a total of three (3) cabinets. A structural analysis of the tower has been completed. (See Nextel Application attached as Exhibit A) As stated in the structural analysis, the existing tower structure is capable of supporting the proposed T-Mobile installation.

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

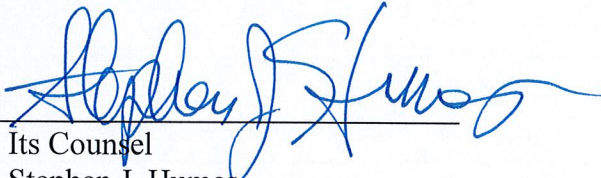
1. The proposed modification will not increase the height of T-Mobile's approved antennas on the tower and will not extend the boundaries of the existing compound area. The enclosed tower drawings confirm that the planned changes will not increase the overall height of the tower.
2. The installation of T-Mobile equipment, as reflected in Exhibit A, will not require an extension of the site boundaries.
3. The proposed modification to the facility will not increase the noise levels at the existing facility by six decibels or more. T-Mobile's equipment is self-contained and requires no additional heating, ventilation or cooling equipment.
4. The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at or above the applicable standard.

For the foregoing reasons, T-Mobile respectfully submits that the proposed addition of the antennas and equipment at the Harwinton facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Thank you for your consideration of this matter.

Respectfully submitted,

OMNIPOINT COMMUNICATIONS, INC.

By: _____

A handwritten signature in blue ink, appearing to read "Stephen J. Humes", is written over a horizontal line. The signature is fluid and cursive.

Its Counsel
Stephen J. Humes

Exhibit A
Nextel Application
133 Clearview Avenue
Harwinton, Connecticut

PF

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



RECEIVED
OCT 10 2003
CONNECTICUT
SITING COUNCIL

EM-NEXTEL-066-031010

October 9, 2003

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 133 Clearview Avenue, Harwinton, Connecticut. This facility is located on property owned by Clearview Industrial Park LLC. The tower is owned by SBA Communications Inc.

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: Marie M. Knudsen, First Selectman

EXEMPT MODIFICATION
133 CLEARVIEW AVENUE
HARWINTON, CONNECTICUT 06731

RECEIVED
OCT 10 2003

CONNECTICUT
SITING COUNCIL

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 133 Clearview Avenue, Harwinton, Connecticut.

BACKGROUND

This existing facility, located at 133 Clearview Avenue in Harwinton, Connecticut consists of a 195-foot tall monopole that is owned by SBA Communications Inc. and is located on property of Clearview Industrial Park LLC. The site will provide wireless service coverage for Nextel to this section of Harwinton, Routes 8, 4 and 118.

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 173-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 46 32.5 and longitude 73 05 56.4 and a ground elevation of 987'.

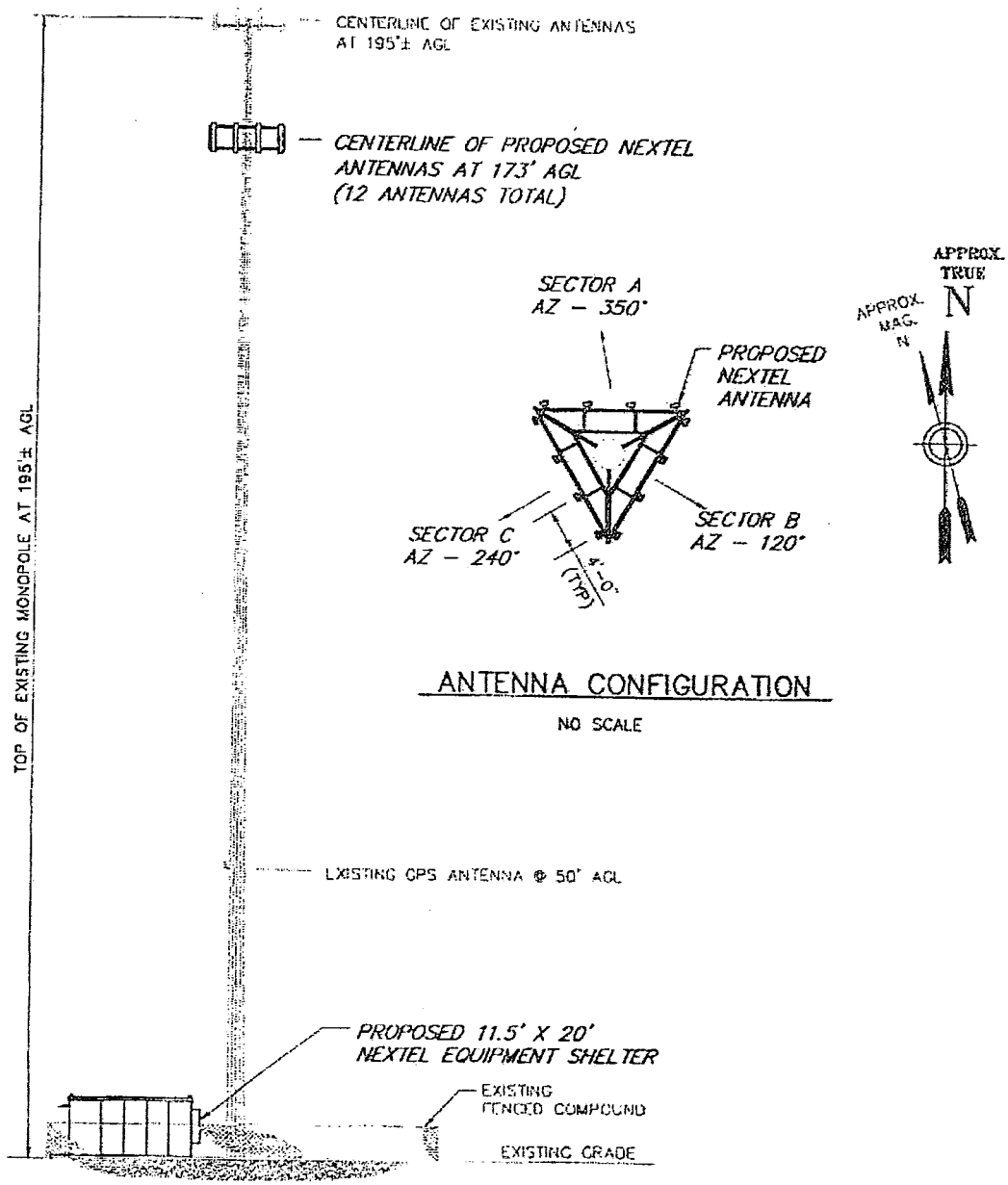
POWER DENSITY INFORMATION

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 proposed Nextel antennas reach just 1.8617 % 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

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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ENGINEERS, SURVEYING PLANNERS & LANDSCAPE ARCHITECTS
2133 SILAS DEANE HIGHWAY
ROCKY HILL, CT 06067

NEXTEL COMMUNICATIONS

GENERAL DYNAMICS
Wireless Services
77 "A" STREET
NEEDHAM HEIGHTS, MA 02494-2806

CT3653
HARWINTON NORTH
133 CLEARVIEW AVENUE
HARWINTON, CT 06791

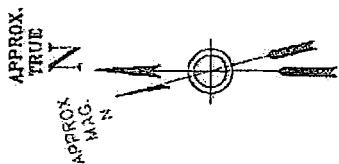
CHA PROJ. NO. - 12604-1003

2 OF 2

REV 1

LE-2

File: E:\12604\1003\Leads Exhibit\3653\F2.dwg User: 1013 11/25/2003 01:19 PM



PROPOSED NEXTEL 11.5'x20' EQUIPMENT SHELTER ON 4 CONCRETE PIERS AND TOWER FOUNDATION PAD

PROPOSED UNDERGROUND POWER & TELCO ROUTING

PROPOSED NEXTEL GPS ANTENNA

EXISTING TEST WELL

PROPOSED NEXTEL 15'x26' LEASE AREA

TRANSFORMER

PROPOSED NEXTEL GPS ANTENNA

EXISTING POWER/TELCO BACKEARD

APPROXIMATE LOCATION OF UNDERGROUND POWER

APPROXIMATE LOCATION OF UNDERGROUND TELEPHONE

EXISTING CRUSHED STONE SURFACE

EXISTING EQUIPMENT

EXISTING 20' WIDE ACCESS EASEMENT

PROPOSED NEXTEL ICE BRIDGE

NEXTEL TO USE EXISTING ACCESS & PARKING

EXISTING 195' MONOPOLE

PROPOSED POWER & TELCO SOURCE

EXISTING 12' WIDE SWING GATE

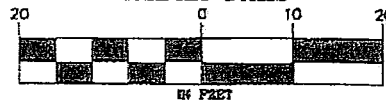
35'-4" X 35'-4" CONCRETE FOUNDATION

100' X 100' LEASE AREA

RF 914

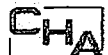
SITE PLAN

GRAPHIC SCALE



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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NEXTEL COMMUNICATIONS

GENERAL DYNAMICS
Wireless Services
77 "A" STREET
NEEDHAM HEIGHTS, MA. 02494-2805

CT3653
HARWINTON NORTH
133 CLEARVIEW AVENUE
HARWINTON, CT 06791

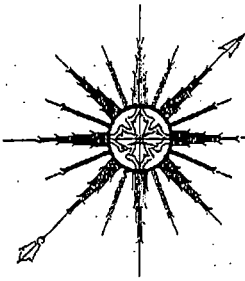
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1 OF 2

REV 1

LE-1

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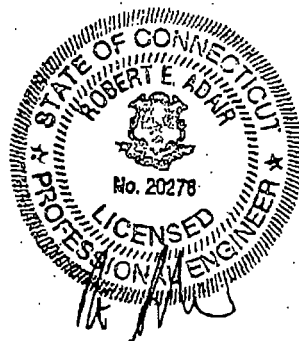
ALL-POINTS TECHNOLOGY CORPORATION, P.C.

STRUCTURAL ANALYSIS REPORT
195' MONOPOLE TOWER
HARWINTON, CONNECTICUT

Prepared for
General Dynamics Network Systems, Inc.

Nextel Site #CT-3653; Harwinton North

October 7, 2003



APT Project #CT133160

ATTACHMENT C

**STRUCTURAL ANALYSIS REPORT
195' MONOPOLE TOWER
HARWINTON, CONNECTICUT
prepared for
General Dynamics Network Systems, Inc.**

EXECUTIVE SUMMARY:

All-Points Technology Corporation, P.C. (APT) performed an inspection and structural analysis of this 195-foot monopole tower located in Harwinton, Connecticut. The analysis was performed for Nextel Communications' proposed installation of twelve DB844H90 panel antennas on a low-profile platform at 173'. Waveguide cables are to be twelve 1-5/8" cables installed inside the pole.

Our analysis indicates the tower requires modifications to support Nextel's proposed antennas. Fine cracks observed in the mat foundation should be sealed to prevent water entry.

INTRODUCTION:

A structural analysis of this communications tower was performed by APT for General Dynamics Network Systems, Inc.. The tower is located at 133 Clearview Avenue in Harwinton, Connecticut.

APT visited the tower site on October 1, 2003. Robert E. Adair, P.E. climbed the tower in its entirety to compile data necessary to perform the structural analysis. The analysis also relied on tower information and proposed antennas provided by SBA, Inc., the tower owner.

The structure is a 195-foot galvanized steel, five section monopole manufactured by F.A. Nudd, Inc. The analysis was conducted using the following antenna inventory:

Antenna	Elev.	Mount	Coax.
(12) RR90-17 panels & (24) TMAs (T-Mobile)	195'	14' low-profile platform	(24) 1-5/8"
<i>(12) DB844H80 panels (Verizon)</i>	<i>183'</i>	<i>14' low-profile platform</i>	<i>(12) 1-5/8"</i>
(12) DB844H90 panels (Nextel)	173'	14' low-profile platform	(12) 1-5/8"

Future antennas to be installed are shown in *italic* text.

Proposed antennas shown in **bold** text.

CONDITION INSPECTION:

150 Old Westside Road
North Conway, NH 03860
(603) 356-5214

All-Points Technology Corporation

3 Saddlebrook Drive
Killingworth, CT 06419
(860) 663-1697

- **General Observations:** The tower, a galvanized steel structure, appeared to be in very good condition. No signs of movement or overstress of the tower were observed. The tower base foundation concrete was observed to have a number of hairline cracks in its surface. We recommend these be sealed to prevent further damage.
- **Antenna Connections:** Antenna mounting hardware was in very good condition, with corrosion resistant hardware and galvanized members prevalent.
- **Splice & Anchor Connections:** Observed splice and anchor bolts appeared to be in good condition. The top section of tower is installed using a bolted flange connection. No loose or missing bolts or nuts were observed.

STRUCTURAL ANALYSIS:

Methodology:

The structural analysis was done in accordance with TIA/EIA-222-F (EIA), Structural Standards for Steel Antenna Towers and Antenna Supporting Structures; and the American Institute of Steel Construction (AISC), Manual of Steel Construction, Allowable Stress Design, Ninth Edition. The analysis was conducted using a wind speed of 80 miles per hour and one-half inch of radial ice over the entire structure and all appurtenances. The TIA/EIA Standard requires a minimum of 80-mph wind load for Litchfield County, Connecticut.

Two analytical methods were used to evaluate the structure: a two-dimensional linear computer model developed by APT, and a P-delta analysis using CSTRAAD finite element software distributed by Digital Canal Software. The 2-D model was used to generate dead loads of the tower and all of its appurtenances, radial ice loads and the resultant wind loading. The maximum bending moments and axial loads were used to calculate combined axial and bending stresses on each section of the monopole, which were compared to allowable stresses according to AISC and TIA/EIA.

Loads generated in the 2-D model were input into the CSTRAAD program to evaluate secondary bending moments induced during deflection of the structure under load and to independently evaluate stresses. Evaluation of secondary bending moments is required by EIA paragraph 3.1.15. Our analysis indicates that the secondary moments exceed those of the linear analysis, and therefore govern in determining the capacity of the structure.

EIA requires two loading conditions to be evaluated to determine the tower's capacity. The higher stresses resulting from the two cases is used to calculate the tower capacity:

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North Conway, NH 03860
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3 Saddlebrook Drive
Killingworth, CT 06419
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- Case 1 = Wind Load (without ice) + Tower Dead Load (controls)
- Case 2 = **0.75** Wind Load (with ice) + Ice Load + Tower Dead Load

EIA permits a one-third increase in allowable stresses for towers less than 700-feet tall. Allowable stresses of tower members were increased by one-third in computing the load capacity values indicated herein.

ANALYSIS RESULTS:

Our analysis determined the tower will support the proposed antenna array, however baseplate modifications are required. The following table summarizes the capacity of the tower based on combined axial and bending stresses:

Elevation	Capacity
0'-41'	66%
41'-85'	60%
85'-130'	65%
130'-180'	65%
180'-195'	27%

The capability of the existing foundation to support the proposed load was evaluated by comparing design reactions with those imposed by the proposed loading. We calculated reactions to be less than design reactions, indicating the existing foundation is adequate to support the proposed loads.

Base reactions imposed with the proposed antennas were calculated to be as follows:

Compression: 43.0 kips
Total Shear: 25.4 kips
Overturning Moment: 3277 ft-kips

CONCLUSIONS AND SUGGESTIONS:

As detailed above, our analysis indicates that baseplate modifications are required for the existing 195' F.A. Nudd monopole tower in Harwinton, Connecticut to be capable of supporting Nextel Communications' proposed antennas. Design and detailing of these

modifications is beyond the scope of this analysis, but we would be happy to provide this service to you.

We recommend that the base foundation be sealed with a quality concrete sealer, such as Thorseal.

LIMITATIONS:

This report is based on the following:

1. Tower is properly installed and maintained.
2. All members are in new condition.
3. All bolts are in place and are properly tightened.
4. Tower is in plumb condition.
5. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.

All-Points Technology Corporation, P.C. (APT) is not responsible for any modifications completed prior to or hereafter which APT is not or was not directly involved. Modifications include but are not limited to:

1. Adding or relocating antennas.
2. Installing antenna mounting gates or side arms.
3. Extending tower.

APT hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact APT. APT disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

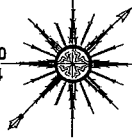
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Appendix A

Tower Schematic



Tower Schematic

SHEET: 1 OF 1

SCALE: AS NOTED

DRAWN BY: REA

DATE: 7 OCT 03

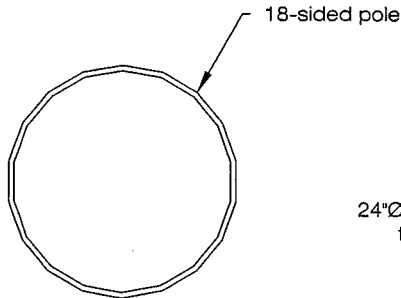
APT JOB #CT133160



GENERAL DYNAMICS
 77 "A" STREET
 NEEDHAM HEIGHTS, MA
 02494-2806

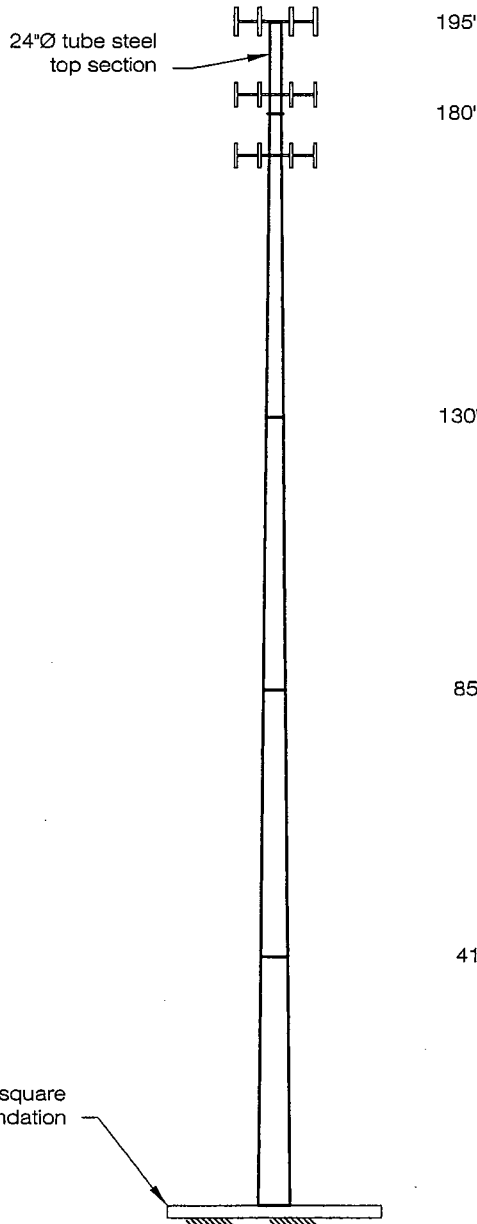
195' MONOPOLE TOWER
 HARWINTON, CONNECTICUT

NEXTEL #CT-3653;
 HARWINTON NORTH



Typical Section
 No Scale

18-sided pole



35'-4" square
 mat foundation

24"Ø tube steel
 top section

195'

180'

130'

85'

41'

24"	35.25"	45.38"	55.28"	64.5"
0.281"	0.250"	0.3125"	0.375"	0.375"
Bottom Dia.				
Thickness				

Tower Elevation

Scale: 1"=30'

Harwinton, CT (133 Clearview Ave.) - CT Siting Council Power Density Calculations						
Nextel Directional Antennas ESMR - 851 MHz at centerline 175' AGL						
Transmitters:	Frequency in MHz	CT Standard mW/cm ²	Number of Channels	ERP (W) per channel	Centerline of Tx antennas AGL (ft.)	Note: Power densities are in mW/cm ²
Nextel Digital ESMR - Proposed	851	0.5673	9	100	175	Power density calculated at base of tower 0.070561959 1.8617%
Total % of CT Standard						1.8617%