

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.state.ct.us/csc/index.htm

October 24, 2002

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

RE: **EM-NEXTEL-158-020731** - Nextel Communications, Inc. notice of intent to modify an existing telecommunications facility located at 515 Boston Post Road, Westport, Connecticut.

Dear Mr. Flynn:

At a public meeting held on October 23, 2002, 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 July 31, 2002. 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.

////.f.

Mortimer A. Gelsto

Chairman

MAG/laf

c: Honorable Diane G. Farrell, First Selectman, Town of Westport Katherine Barnard, Director, Planning & Zoning, Town of Westport Julie Donaldson Kohler, Esq., Hurwitz & Sagarin LLC Michele G. Briggs, Southwestern Bell Mobile Systems, LLC

MEMORANDUM

DAVID MARTIN TO

FROM: TOM FLYNN

NEXTEL ZONING COORDINATOR

RE:

WESTPORT 8-24 HEARING

EM-NEXTEL-158-020731

DATE: OCT. 7, 2002

David,

As per our conversation, attached is the affirmative 8-24 report from the Town of Westport.

Tom Flynn



WESTPORT CONNECTICUT

PLANNING & ZONING
TOWN HALL, 110 MYRTLE AVENUE
WESTPORT, CONNECTICUT 06880
(203) 341-1030 • (203) 341-1079
(203) 454-6145 - fax

Hearing: September 19, 2002 Decision: September 19, 2002

Honorable Diane Goss Farrell, First Selectman 110 Myrtle Avenue Town Hall Westport, CT 06880

RE: §8-24 Request for Lease of Municipal Property at 515 Post Road East

Dear Mrs. Farrell:

I. Proposal/Background

A. 1997 Town Plan of Conservation and Development:

The Utilities Plan contained within the 1997 Plan, encourages maximum use of existing communications towers for additional service wherever possible, (p. 46).

- B. Existing Zoning: General Business District (GBD)
- C. Public Utilities: Served by public sewer and water.
- D. Flood Zone Designation: The existing and proposed structures are located outside the 100-year floodplain
- E. Location Description: 515 Post Road East is a 1.278 acre town-owned property where the Town Fire and Building Departments are located in an existing building on site. A 150-foot tall telecommunications tower is also located on the property. This tower is owned by Sprint Spectrum, LLC. The Town's emergency services and various commercial telecommunication providers have antennas located on the Tower. Sprint and the other commercial providers have a lease agreement with the Town to occupy the space on site.

F. Project Description:

A lease is proposed between the Town of Westport (Lessor) and Nextel Communications (Lessee) to allow Nextel to place a platform and twelve (12) panel antennas, approximately 4 feet long, at an elevation of 85-feet measured from average existing grade, onto the existing communication tower, and place associated equipment in a 300 +/-square foot area on the roof of the building located at 515 Post Road East for monetary consideration to the Town. The lease also requires Nextel to remove and install a new roof-mounted chiller unit associated with the HVAC facilities for the Fire/Building Department. The chiller unit is not associated with the telecommunication facilities.

Nextel will request an amendment to the lease agreement if in the future, the 135-foot elevation becomes available to locate their telecommunication facilities.

28-24 Request, 515 Post Road East, Lease with Nextel Page 2 of 3

II. Findings

- A. The lease will allow co-location of telecommunication facilities on the existing monopole located at 515 Post Road East. This is consistent with the 1997 Town Plan of Conservation and Development that encourages maximum use of existing communications towers for additional service wherever possible.
- B. The siting of wireless telecommunication service facilities in the General Business District is consistent with §32-16.2 of the Westport Zoning Regulations.
- C. The submitted plans show Nextel's platform, antennas and roof-mounted equipment cabinets will adhere to setback requirements for the GBD listed in §32-16.3.
- D. Nextel's equipment will utilize 300 SF of gross floor area and is consistent with §32-16.5 that limits equipment shelters to 750 SF.
- E. The Conservation Department reviewed the project and found there is no inland wetland or Waterway Protection Line Ordinance jurisdiction.
- F. The Health Department reviewed the project and has no objection to the proposal.
- G. The Police Department reviewed the project. The Police report have been assured by members of the Westport Fire Department the lease is in the best interest of the Town of Westport and Emergency Services for the Town.
- H. The Fire Department reviewed the project and requests the maximum elevation of the proposed facilities not exceed the 85-foot elevation as measured from average existing grade to avoid potential interference with emergency service transmissions. This means the platform and antenna height will not exceed 85-foot elevation. At the 9/19/02 public hearing, the Fire Department stated their preference for the facilities to be located at the 135-foot elevation if it becomes available in the future. The carrier can be at the 85-foot or 135-foot elevation.
- I. The Town Attorney has advised that a special permit from the Planning and Zoning Commission is not required in view of recent Supreme Court rulings on telecommunications. However, since this is Town owned property, a review by the P&ZC under §8-24 is required for modifications to a lease, as well as Board of Selectmen approval of the lease.

III. Recommendations

A. The Planning and Zoning Commission supports co-location of telecommunication facilities at approximately the 85-foot or 135-foot elevation on the existing monopole as this is consistent with the 1997 Town Plan of Conservation and Development that encourages maximum use of existing communications towers for additional service wherever possible.

88-24 Request, 515 Post Road East, Lease with Nextel Page 3 of 3

- B. The Commission recommends the lease mandate the maximum height of the Nextel facilities, including the antennas, will not exceed 85-feet or 135-feet on the existing monopole, as requested by the Fire Department. No antenna will exceed the 150-foot elevation.
- C. The Commission recommends a revised elevation drawing be attached to the lease showing conformance to the Fire Department's request.
- D. The Commission recommends the following changes to the lease:
 - 1. Item #3, Tests and Construction, should be changed to remove reference to "5-business days" and insert "a reasonable period of time," regarding when the Town must respond to Nextel's submission of a site plan and specifications.
 - 2. Note #4 on Exhibit B should be removed that indicates the type, number and mounting positions and locations of antennas and transmission lines shown on the attached plan are illustrative only.

After discussion, it was moved by Mr. Nelson and seconded by Mr. Stashower to issue a Positive Report to the First Selectwoman for 515 Post Road East: §8-24 Request by the First Selectwoman for a report regarding the Fire Department's lease with Nextel to share the existing tower at 515 Post Road East, Assessor's Map 5318-1, Lot 6, Zone GBD.

VOTE:

{Lowenstein, Stashower, Kuechenmeister, Nelson, Van -6-Ayes

Gelder, Gottlieb}

Nays -0-

Abstentions -1-{Crowther}

Sincerely,

Elicina Guerateia ne Eleanor Lowenstein

Chairman

Planning and Zoning Commission

Board of Selectman CC: Chairman, Board of Finance **RTM Moderator** Chairman, P&Z Study Committee Director of Public Works Town Attorney

PECENDED SERVICE

WESTPORT CONNECTICUT



PLANNING & ZONING TOWN HALL, 110 MYRTLE AVENUE WESTPORT, CONNECTICUT 06880 (203) 341-1030 • (203) 341-1079 (203) 454-6145 - fax

September 3, 2002

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

EM-Nextel--158-020731

Nextel Communications on existing tower at 515 Post Road East, Westport

Dear Mr. Gelston:

On September 3, 2002 the Town of Westport received notification that the CT Siting Council will be considering an addition by Nextel to an existing tower on Town-owned property at 515 Post Road East, Westport, on September 5, 2002.

As of this date, Nextel has not received the required approvals from the Town of Westport. The Planning and Zoning Commission is required to submit an 8-24 Report to the First Selectwoman before the Town can proceed with the lease of this Town-owned property. The Planning and Zoning Commission's public hearing is scheduled for September 19, 2002.

Please do not act on the above referenced request until the Town of Westport has authorized this lease.

Thank you.

Sincerely,

Katherine Barnard Director Planning and Zoning

Diane G. Farrell, First Selectwoman Cc:

Ira Bloom, Town Attorney Richard Gough, Fire Chief

Eleanor Lowenstein, Chairman, Planning and Zoning Commission

WESTPORT CONNECTICUT



PLANNING & ZONING
TOWN HALL, 110 MYRTLE AVENUE
WESTPORT, CONNECTICUT 06880
(203) 341-1030 • (203) 341-1079
(203) 454-6145 - fax

RECEIVED
AUG 1 6 2002

August 14, 2002

CONNECTICUT SITING COUNCIL

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

Re:

EM-Nextel--158-020731

Nextel Communications on existing tower at 515 Post Road East, Westport

Dear Mr. Phelps:

On August 13, 2002 the Town of Westport received notification that the CT Siting Council will be considering an addition by Nextel to an existing tower on Town-owned property at 515 Post Road East, Westport, on August 15, 2002.

As of this date, Nextel has not received the required approvals from the Town of Westport. The Planning and Zoning Commission is required to submit an 8-24 Report to the First Selectwoman before the Town can proceed with the lease of this Town-owned property.

Please do not act on the above referenced request until the Town of Westport has authorized this lease.

Thank you.

Sincerely,

Katherine Barnard

Director Planning and Zoning

Cc: Diane G. Farrell, First Selectwoman

Ira Bloom, Town Attorney Richard Gough, Fire Chief

Nextel Communications

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



July 31, 2002

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

JUL 3 1 2002

Dear Chairman Gelston:

CONNECTICUT SITING COUNCIL

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 515 Boston Post Road, Westport, Connecticut. This facility is located on property owned by the Town of Westport and serves as the location of the Fire Department. The facility is owned and operated by Sprint PCS to provide a site for wireless telecommunications coverage and the Town's police, fire and emergency services telecommunications.

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. Elynn II

Zoning Manager

Nextel Communications

EM-NEXTEL-158-020731

Enclosure

Cc:

Town of Westport

EXEMPT MODIFICATION 515 BOSTON POST ROAD WESTPORT, CONNECTICUT

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 515 Boston Post Road in Westport, Connecticut.

BACKGROUND

This existing facility, located at 515 Boston Post Road in Westport, Connecticut consists of a 150-foot tall monopole that is owned by Sprint PCS on property owned by the Town of Westport. The tower is currently used by several wireless carriers and the Town of Westport to provide wireless and emergency service to this section of town. This site provides coverage and along Routes 1 and I-95 and the vicinity of the downtown of Westport.

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 135-foot level of the tower (see Attachment A) and place 4 all weather equipment boxes on the roof of the Fire Department adjacent to the tower (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).

POWER DENSITY INFORMATION

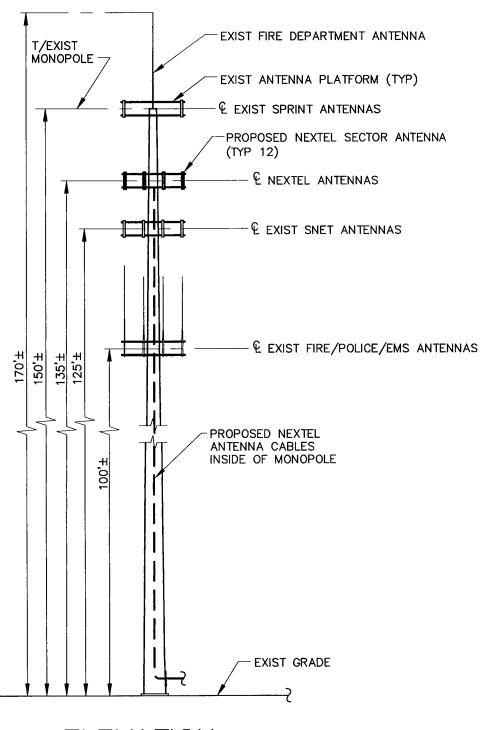
The operation of Nextel's antennas will not increase the total radio frequency electromagnetic power density level to a level at (or even near) existing State and Federal Standards. "Worst case" calculations, measured to a point at the base of the tower, show the combined power levels for the existing Sprint and proposed Nextel antennas reach just 29.04% 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.

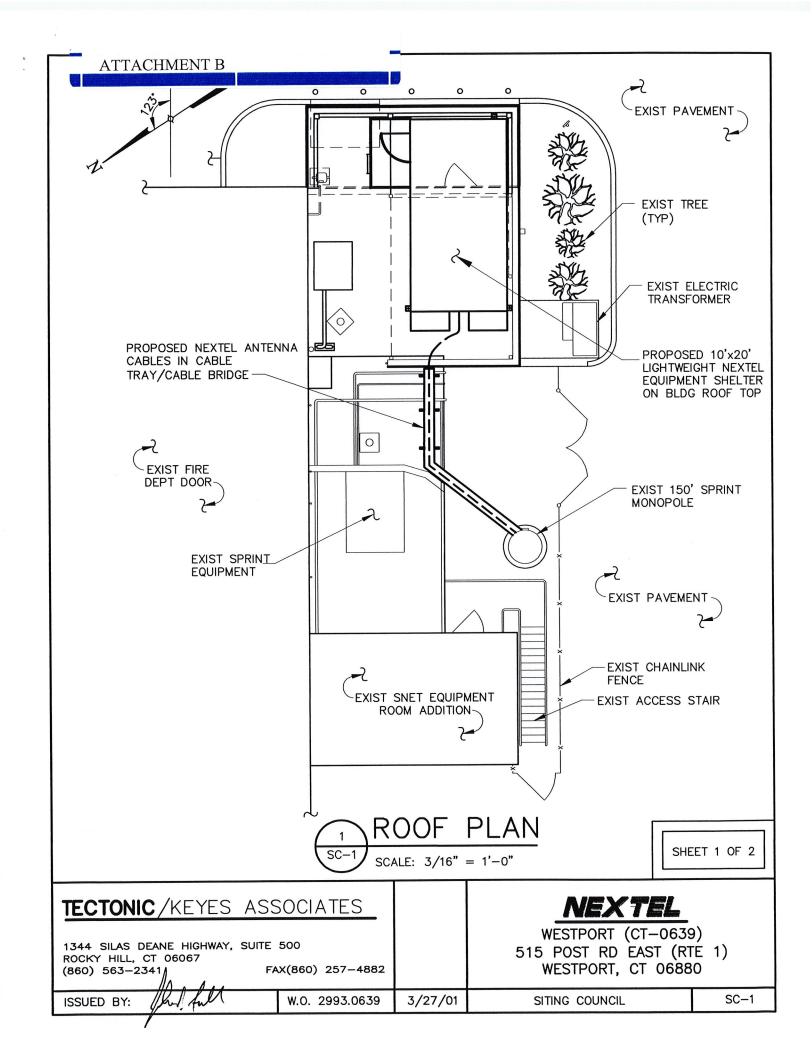






SHEET 2 OF 2

TECTONIC/KEYES AS	SSOCIATES		NEXTEL	
1344 SILAS DEANE HIGHWAY, SUI' ROCKY HILL, CT 06067 (860) 563-2341	TE 500 FAX(860) 257—4882		WESTPORT (CT-0639 515 POST RD EAST (RT WESTPORT, CT 0688	rÉ 1)
ISSUED BY: Ih Sall	W.O. 2993.0639	3/27/01	SITING COUNCIL	SC-2





CORPORATE OFFICE:
Mountainville, NY (800)-829-6531
Other offices throughout the United States

4 West Main Street, Suite 401 Northborough, Massachusetts 01532 (508) 393-7411 FAX: (508) 393-4740 www.tectonicengineering.com

NEXTEL
WESTPORT FIRE DEPARTMENT
EXISTING 148' MONOPOLE
WESTPORT, CT

STRUCTURAL ANALYSIS REPORT APRIL 12, 2001

6.0 1.0 INTRODUCTION

The existing 148-foot monopole is located at 515 Post Road, Westport, CT. It serves the communication needs of several telecommunications companies. Nextel has proposed installing additional antennas on the monopole at approximate elevation 135 feet.

Tectonic Engineering Consultants P.C. has performed a structural analysis of the monopole to verify its adequacy for supporting additional antennas, in accordance with current code requirements.

1.1 Information Provided

Tectonic Engineering was furnished with the following information:

148' Monopole Drawing, Job Number 2288 prepared by Summit Manufacturing, Inc.

2.0 STRUCTURE DESCRIPTION

2.1 General

The existing 148-foot monopole is a 12-sided tapered monopole. The monopole is made up of four sections of varying lengths. Splices between the sections are slip joint types. Summit Manufacturing, Inc. designed the monopole in 1997.

The monopole is 49.79" across the flats at the base, and 22" across the flats at elevation 148'. The wall thickness of the first two sections is 1/2", the wall thickness of the third section is 3/8" and the wall thickness of the fourth section is 1/4". The monopole was designed with several feed line entrance ports and exit ports.

A diagram of the structure is presented in Figure 1, attached.

2.2 Original Loading Criteria

The original design was based on ANSI/TIA/EIA-222-F 1996 using a basic wind speed of 90 mph with no ice, and a reduced wind speed in conjunction with ½" radial ice. The monopole was designed to support the following loads:

- 12 DB980H90 panel antennas, at elevation 148'
- 1 Low profile platform at elevation 148'
- 12 ALP9212-N panel antennas at elevation 120'

- 1 Low profile platform at elevation 120'
- 1 18 Sq. Ft. of panel antennas at elevation 100'
- 1 Low profile platform at elevation 100'
- 2 Channel Master whip antennas with stand off arms at elevation 50'
- 1 GPS antenna with mount at elevation 15'

2.3. Monopole Foundation

No information was available regarding the foundation of this monopole.

3.0 EXISTING CONDITION

3.1 Field Visit

The monopole was inspected and the antennas were inventoried for the current analysis on April 4, 2001. Photographs were taken to document the existing configuration and conditions.

Based on our limited inspection, the monopole appears to be in good condition. The galvanizing on the monopole is intact. No damage or significant deformation of the monopole was observed. The exposed portion of the concrete foundation, the grout and anchor bolts are in good condition.

Based on these findings, we believe that the monopole is capable of supporting its original design loads.

3.2 Existing Antennas and Equipment

At the time of our inspection, the monopole was found to be supporting the items listed below.

- 1 Westport Fire Department Dipole Model DB420D at elevation 150'
- 6 Sprint panel antennas at elevation 148'
- 1 Low profile platform at elevation 148'
- 9 SNET panel antennas at elevation 121'
- 1 Low profile platform at elevation 121'
- 2 1.27" Diameter x 5'-6" whip antennas at elevation 97'
- 1 2.4" Diameter x 20' whip antenna at elevation 97'
- 1 1.31" Diameter x 20' whip antenna at elevation 97'
- 1 3.4" Diameter x 5' whip antenna at elevation 97'
- 1 0.5" Diameter x 10' whip antenna at elevation 97'
- 1 1.3" Diameter x 15' whip antenna at elevation 97'
- 1 2.35" Diameter x 15' whip antenna at elevation 97'
- 1 1.0" Diameter x 10' whip antenna at elevation 97'
- 1 1.32" Diameter x 20' whip antenna at elevation 97'
- 1 Low profile platform at elevation 97'

- 2 1.32" Diameter x 20' whip antenna at elevation 60'
- 2 3.4" Diameter x 20' whip antenna at elevation 60'
- 1 Stand off arm at elevation 60'
- -- Step bolts with a safety cable to the top of the monopole

4.0 PROPOSED INSTALLATION

It is our understanding that all existing antennas and equipment will remain on the structure, and the following items are proposed for addition to the monopole:

Nextel PCS:

- 8 Decibel DB844H65 (E) panel antennas at the 135' level (centerline), mounted four (4) per sector.
- 4 Decibel DB844H90 (E) panel antennas at the 135' level (centerline), mounted four (4) per sector.
- 1 Low profile platform at the 135' level.
- 12 1-5/8" diameter coaxial cables routed up the interior of the monopole to the 135' level.

5.0 STRUCTURAL ANALYSIS

5.1 Current Loading Criteria and Procedure

The Connecticut Building Code 2000 Supplement requires this structure to be analyzed in accordance with the provisions of ANSI/TIA/EIA-222-F-1996 "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". The basic wind speed of 85 mph applies to Fairfield County, CT.

Appendix A of the Connecticut Building Code 2000 Supplemental State Building Code requires a design wind speed of 80 mph for Westport.

We used a wind speed of 85 mph (per ANSI/TIA/EIA-222-F-1996) with no ice for the first load case. Ice loads have been established based on a 0.5" radial ice thickness in accordance with industry standard practice. A reduced wind speed of 64 mph in conjunction with ice was used for the second load case. We also checked the deflection of the monopole using an operational wind speed of 50 mph as our third load case.

5.2 Results

Under the wind loading condition described above, the results of our analysis indicate the calculated stresses in the monopole are less than the allowable values established by applicable codes.

The maximum calculated stress values are summarized below.

Monopole Elevation (feet)	Combined. Stress	#Allowable Stress	Interaction	Sellis
0.0	42.33 ksi	48 ksi	.88	ОК
64.50	43.61 ksi	48 ksi	.91	OK
72.10	40.77 ksi	48 ksi	.85	OK
79.10	37.88 ksi	48 ksi	.79	OK

6.0 CONCLUSIONS AND RECOMMENDATIONS

As a result of our analysis, we find that the existing monopole has sufficient capacity to permit the proposed installation of the antennas and platform by Nextel. The maximum stress level in the monopole is 91% of the allowable stress. The allowable stress levels were increased from standard values by one-third as permitted by AISC and TIA/EIA.

The deflection angle of the monopole will not exceed 3 degrees at the 50-mph operational wind speed. No structural problems for the monopole are anticipated, and no modifications are necessary.

We cannot make any conclusions regarding the adequacy of the existing foundation and anchor bolts, since no information was provided.

Any future changes to the antenna size or configuration at any of the levels, or changes to any other appurtenances, should be reviewed with respect to their effect on structural loads prior to implementation of the changes. Also, We did not analyze this monopole for any future dish antennas.

Prepared by: A

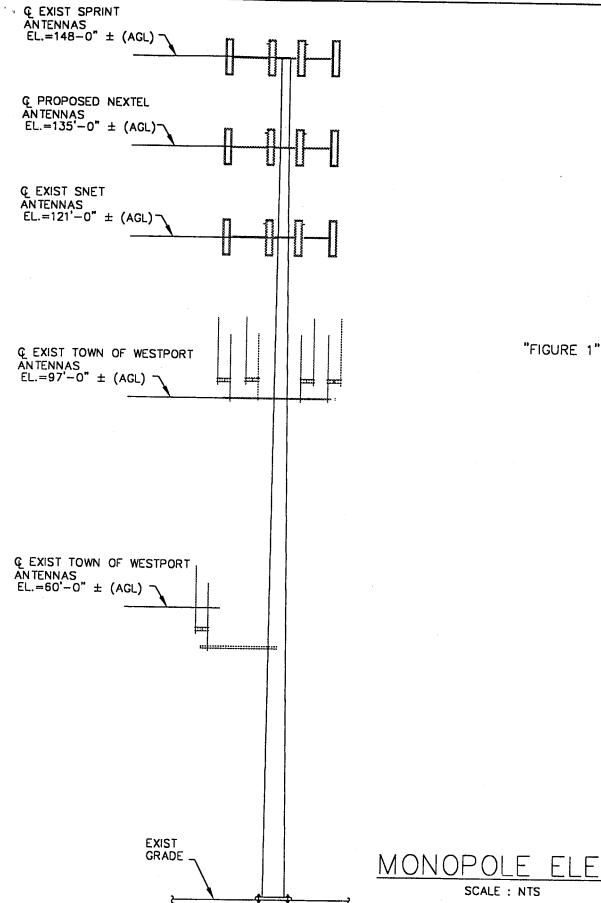
Date:

Donald M Leffert, P.E., Senior Engineer

Approved by: Lon

Date: 4/17/5/

Daniel Holzman, P.E., Regional Director



MONOPOLE ELEVATION

NEXTEL WESTPORT 515 POST ROAD WESTPORT, CT

♦	Sprint	Spectrum	LF
₹	Sprint	Spectrum	LI

WORK ORDER NO.	DRAWING NUMBER	REV
2993.0639	1	-

	Nextel Digital ESMR - Proposed	Westport	Westport	Westport	Westport	Westport	Westport	Westport	Westport	Springwich	Sprint	Westport	Transmitters:			Nextel Directional Antennas ESMR - 851 MHz at centerline 85' AGL	Westport, CT (515 Post Rd.) - CT Siting Council Power Density Calculations
	851	166	855	155	153	33	46	39	45	880	1962	460	in MHz			enterline 85' AGL	ouncil Power D
	0.5673	0.2000	0.5700	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.5867	1.0000	0.3067	mW/ cm ²				Density Calcula
	ဖ	_		_	_	_	_	_	_	19	3	_	Channels	Number of			tions
	100	85	250	250	40	22	22	22	22	100	122	196.11	per channel	ERP (W)			
	85	100	100	100	100	100	100	100	100	120	150	150	AGL (ft.)	Centerline of			
	0.04476955	0.0030549	0.008985	0.008985	0.0014376	0.00079068	0.00079068	0.00079068	0.00079068	0.047420833	0.021436213	0.00313253	base of tower	Power density	Note: Power den		
29.04%	7.89%	1.53%	1.58%	4.49%	0.72%	0.40%	0.40%	0.40%	0.40%	8.0831%	2.1436%	1.02%	% of CT Standard		Note: Power densities are in mW/ cm2		