STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

February 17, 2000

Ronald C. Clark, Manager – Real Estate
Nextel Communications
100 Corporate Park
Rocky Hill, CT 06067

RE: TS-NEXTEL-152-000131 - Nextel Communications request for an order to approve tower sharing at an existing telecommunications facility located at 41 Manitock Hill Road in Waterford, Connecticut.

Dear Mr. Clark:

At a public meeting held February 16, 2000, 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 order is conditioned on a requirement that vegetative screening be replaced consistent with any applicable town screening requirements.

This facility has 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. Any additional change to this facility will require an explicit request to this agency pursuant to § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or 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 here, in your letter dated January 28, 2000, and in additional information dated February 1, 2000.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/SLL/sll

c: Honorable Paul B. Eccard, First Selectman, Town of Waterford
Mike Lucy, Site Development Manager, Sprint PCS

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STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

February 4, 2000

Honorable Paul B. Eccard
First Selectman
Town of Waterford
Town Hall
15 Rope Ferry Road
Waterford, CT 06385

RE: TS-NEXTEL-152-000131 - Nextel Communications request for an order to approve tower sharing at an existing telecommunications facility located at 41 Manitock Hill Road in Waterford, Connecticut.

Dear Mr. Eccard:

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, February 16, 2000, 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,

Joel M. Rinebold
Executive Director

JMR/jlh

Enclosure: Notice of Tower Sharing

FAX COVER SHEET

DATE: 2/3/00

TO:

NAME: Steve Levine

COMPANY: CSC

FAX#: 827-2950

FROM: RON CLARK, Manager Real Estate Operations
NEXTEL Communications
One Corporate Place
Rocky Hill, CT 06067
Tel: 860-883-2112
Fax: 860-513-5444

No. of Pages (including cover sheet) 4

Re: WaterSord :

REMARKS: URGENT: ___ FOR YOUR REVIEW ___ REPLY ASAP ___

COMMENTS: Steve.-

Per your request.

ENGINEERED SOLUTIONS

LAND STRUCTURES WATER

February 1, 2000

Mr. Ron Clark
Real Estate and Zoning Manager
Nextel Communications, Inc.
100 Corporate Place
Rocky Hill, CT 06067

Re: Capacity Evaluation
Sprint PCS Tower
41 Manitock Hill Road
Waterford, CT
Nextel Site# CT1058
DTC Project No.: 98 403 931

Dear Mr. Clark:

Diversified Technology Consultants (DTC) performed a capacity evaluation of the 136-ft PiRod, Inc. lattice tower occupying the above referenced property. It is DTC's understanding that Nextel wishes to attach a sectorized twelve panel antennae configuration to the subject tower at a mounting height of 127 feet above the top of the tower foundation. The following information was provided to DTC by Nextel Communications Inc. (Nextel):

- PiRod, Inc. tower and foundation design dated 2/25/99.

ORIGINAL DESIGN CONSIDERATIONS:

According to the original design prepared by PiRod, Inc., the subject tower was designed to support the following installations (heights referenced to top of foundation):

- Twelve (12) Allgon 7184.05 antennae with a low profile platform at 136 feet;
- Twelve (12) ALP 9212 antennae with a T-frame attachments at 127 feet;
- Twelve (12) ALP 9212 antennae with a T-frame attachments at 117 feet;
- Two (2) DB810 antennae on two 6'-8" sidearms at 102 feet; and
- Two (2) GPS antennae and mounts located at 80 feet.

The designed foundation is an inverted pier and pad foundation measuring twenty three (23) feet square, 3 1/4 feet below grade with three (3), three-foot diameter circular piers extending 3 1/4 feet above the aforementioned pad. The unfactored base reactions considered in the foundation design were computed based on a 90-mph wind load with 1/2" radial ice and are as follows:

- Overturning moment = 3251.2 ft-kips;
- Shear = 44.0 kips total; and
- Axial = 281.9 kips/leg.

DIVERSIFIED TECHNOLOGY CONSULTANTS
556 WASHINGTON AVENUE NORTH HAVEN CT 06473 203 239 4206 203 234 7376 FAX

EXISTING CONDITIONS SURVEY:

DTC conducted a field verification survey of the tower on December 21, 1999 to confirm the aforementioned data. No contradictions to the supplied information or additional tower appurtenances were observed during the site visit. The general conditions of the tower, which is a galvanized steel structure, were observed to be in excellent condition at the time of the ground inspection conducted by DTC. Surface rust was not readily evident and no missing base plate bolts or nuts were observed.

The December site visit indicated that Sprint PCS is currently located on the structure at the 136 foot mounting elevation with six panel antennae (DB980's) mounted on a low profile platform. A GPS antennae and associated 3.5 foot sidearm mount is located at 80 feet (+/-) above the foundation. The top of the pier foundation measures three feet in diameter. The top of the subject piers extend approximately one (1) foot above grade.

NEXTEL PROPOSED LOADING:

According to the lease exhibit prepared by DTC, Nextel proposes to install eight (8) ALP 7130.33 and four (4) ALP 7120.33 antennae at a mounting height of 127 feet above the tower foundation. Two GPS antennae are proposed at approximately 70 feet above the tower foundation spaced 180 degrees apart.

CAPACITY EVALUATION:

The subject lattice tower is a four carrier structure which is currently occupied by only one platform at the 136 foot level. This mounting height was designed for 12 antennae; presently, six antennae occupy this elevation.

Nextel's proposed buildout at the 127 foot mounting height includes installing twelve panel antennae of smaller size and configuration to those in the original tower design at a predetermined mounting height. The installation of two (2) GPS antennae at the 80 foot height imposes a minimal additional load to the structure. In consideration of the capacity surplus of using antennae smaller than those initially specified in the manufacturer's design and the fact that the tower was designed for 90 mph wind loads (code only requires 85 mph), the addition of one additional GPS antenna at the 80 foot height is acceptable.

The proposed loads do exceed the overall foundation design reactions.

CONCLUSION:

The existing PiRod, Inc four-carrier lattice tower and foundation are capable of withstanding the loads imposed by Nextel's proposed installation as described herein.

LIMITATIONS:

It is assumed that the construction of the tower foundation was done in accordance with the tower manufacturer's design and installation procedures.

DTC conducted a ground-survey to visually inspect the tower.

This Capacity Evaluation is based on the information supplied to DTC by Nextel. DTC did not attempt to independently verify the accuracy or completeness of the information provided.

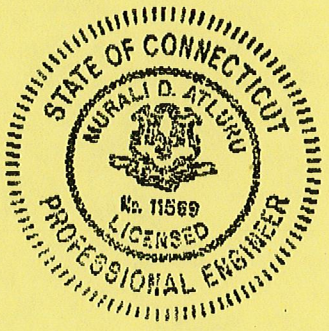
It has been a pleasure to provide these professional services to Nextel Communications, Inc.. Please do not hesitate to call should you have questions.

Sincerely,

DIVERSIFIED TECHNOLOGY CONSULTANTS, INC.

Scott M. Chasse, P.E.
Telecommunications Manager

Dr. Murali Atluru, P.E.
Principal



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Ronald C. Clark
Manager Real Estate Operations

Nextel Communications
100 Corporate Place, Rocky Hill, CT 06067
860 883-2112 FAX 860 513-5444

NEXTEL®

January 28, 2000

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

Dear Mr. Gelston:

Pursuant to Connecticut General Statutes (C.G.S.) § 16-50-aa, Nextel Communications Inc. ("Nextel") respectfully requests to make shared use of an existing communications tower located at 41 Manitock Hill Rd. in Waterford, Connecticut. This facility, which is owned by Sprint PCS, is currently used by Sprint to provide wireless system coverage to the Waterford area. Nextel proposes to add directional antennas to the 137-foot tall lattice tower and install a pre-fabricated equipment shelter at the base of the tower.

Nextel desires to share use of this facility, rather than have the need to possibly construct an additional telecommunications tower in the general area.

Nextel respectfully asks that the Council find the proposed shared use of the facility satisfies the criteria stated in C.G.S. § 16-50-aa and issue an order approving the shared use of this facility.

Thank you for your consideration in this matter.

Sincerely,

Ronald C. Clark
Manager Real Estate Operations

CC: Honorable Paul B. Eccard, First Selectman
Town of Waterford

Mr. Kenneth MacMaster
Sprint PCS

TOWER SHARING

41 MANITOCK HILL ROAD

WATERFORD, CONNECTICUT

BACKGROUND

Nextel Communications, Inc. is licensed by the Federal Communications Commission (FCC) to provide wireless communications service in the State of Connecticut, including the Town of Waterford.

Nextel proposes to mount its antennas on an existing 137-foot lattice communications tower owned by Sprint PCS and place pre-fabricated radio equipment at the base of the tower. The facility is located 41 Manitock Hill Road in Waterford and is currently used by Sprint to provide wireless system coverage to the area.

The site coordinates are 41°-21'-14" N. Latitude and 72°-09'-03" W. Longitude. The ground elevation is 235-feet AMSL.

NEXTEL INSTALLATION

Nextel proposes to install twelve (12) directional antennas center mounted at the 127-foot level of the 137-foot tower (see Attachment A). Nextel also proposes to place a 10-foot by 20-foot pre-fabricated radio equipment shelter at the tower base (see Attachment B). The fenced area around the tower will be expanded to accommodate Nextel's shelter, but will not expand beyond the boundaries of Sprint's leased area.

POWER DENSITY CALCULATIONS

The operation of the additional antennas will not increase the total radio frequency electromagnetic power density, measured at the base of the tower, to a level at (or even near) the State/Federal/ANSI Standards. "Worst case" calculations for a point at the tower base show the combined power density level for the Sprint and Nextel Antennas totals just 6.1046% of the State/Federal/ANSI Standards for exposure in an uncontrolled environment (see Attachment C).

OTHER RELEVANT INFORMATION

C.G.S. § 16-50-aa 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 an order approving such shared use." (C.G.S. § 16-50-aa(c)(1).)

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

- **Technical Feasibility.** The lattice tower, which was designed, engineered and constructed as a multi-carrier structure, is fully capable of supporting the Nextel's antennas and associated tower mounted hardware. The proposed-shared use of this tower therefore is technically feasible.

- **Legal Feasibility.** Under C.G.S. § 16-50-aa, the Council has been authorized to issue an order approving the proposed-shared use of an existing tower facility. (C.G.S. § 16-50-aa(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 Council's 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" on ruling of requests for the shared use of existing tower facilities. Under the authority vested in the Council by C.G.S. § 16-50-aa, an order by the Council approving the shared use would permit the applicant to obtain a building permit for the proposed installations.

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

  A. 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 in or around the area.

  B. The proposed installation would not increase noise levels at the boundaries of the existing site by six decibels or more.

  C. Operations of antennas at this site would not exceed the total radio frequency electromagnetic radiation power density levels adopted by the State of Connecticut and the Federal Communications Commission (FCC). The "worst-case" exposure levels have been calculated for ground level at the tower base. The combined power density level for the Sprint and the proposed Nextel Antennas is only 6.1046% of the State/Federal/ANSI Standards for exposure in an uncontrolled environment. As such, the facility would be operated in full and complete compliance with the relevant sections Federal Telecommunications Act of 1996.

  D. The installation would not require water or sanitary facilities, generate any air emissions or make discharges into water bodies. After construction is completed (construction is anticipated to take 3-4 weeks), the installation would not generate vehicular traffic other than from a periodic maintenance visit by a Nextel service technician.

The proposed shared use of the facility would therefore, have a minimal environmental effect and is indeed, environmentally feasible.

- **Economic Feasibility.** Nextel has entered into an agreement with Sprint PCS to share use of the facility. The proposed-shared use of this facility is therefore economically feasible.

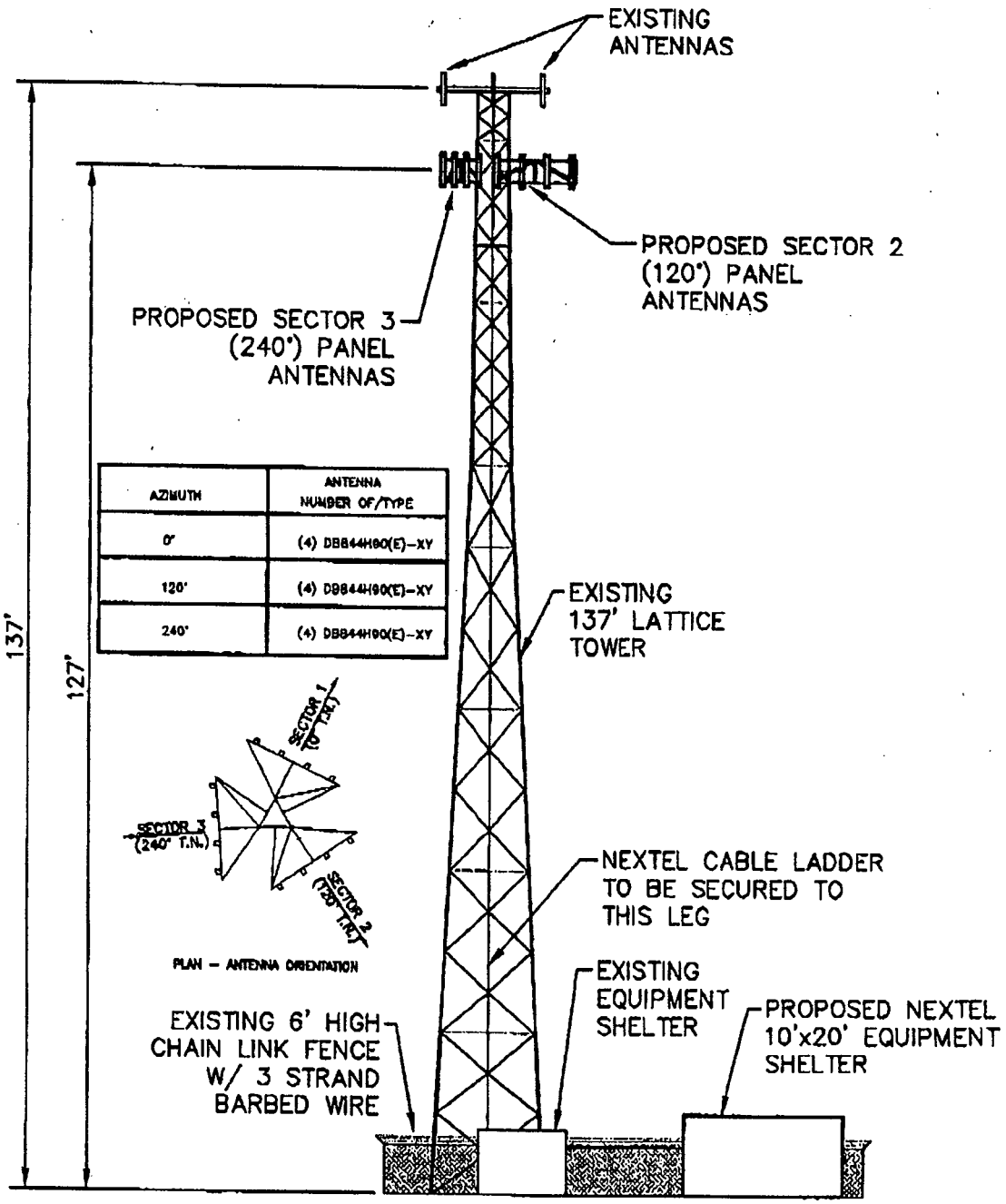
- **Public Safety Concerns.** As stated previously, the tower is structurally capable of supporting the proposed antennas and radio frequency emissions fall well below State

and Federal Standards. The Applicant is not aware of any other public safety issue(s) relative to the shared use of this facility.

In reality, the provision of additional wireless coverage can be expected to enhance the safety, security and welfare of local residents as well as those traveling through the area. The simple fact that *more than one-half million* wireless 911 calls were made in Connecticut during 1998, clearly demonstrates the positive impact wireless communications service has had on public safety in the State. The benefits are further illustrated by the decision of many law enforcement agencies here in Connecticut, and in other parts of the country, to provide mobile phones to local resident groups, civic organizations, etc., to improve, expand and enhance emergency communications capabilities. The proposed-shared use of this facility can likewise contribute to the public's safety and security in Waterford.

CONCLUSION

For the reasons discussed above, the proposed shared use of this existing tower facility satisfies the criteria stated in C.G.S. § 16-50-aa, and advances the General Assembly's and the Siting Council's goal of preventing to proliferation of towers in Connecticut. Nextel therefore respectfully requests the Siting Council issue an order approving the shared use of this telecommunications facility.



SOUTH ELEVATION

SCALE: N.T.S.

dtc

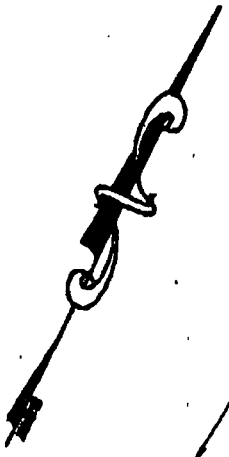
DIVERSIFIED TECHNOLOGY CONSULTANTS

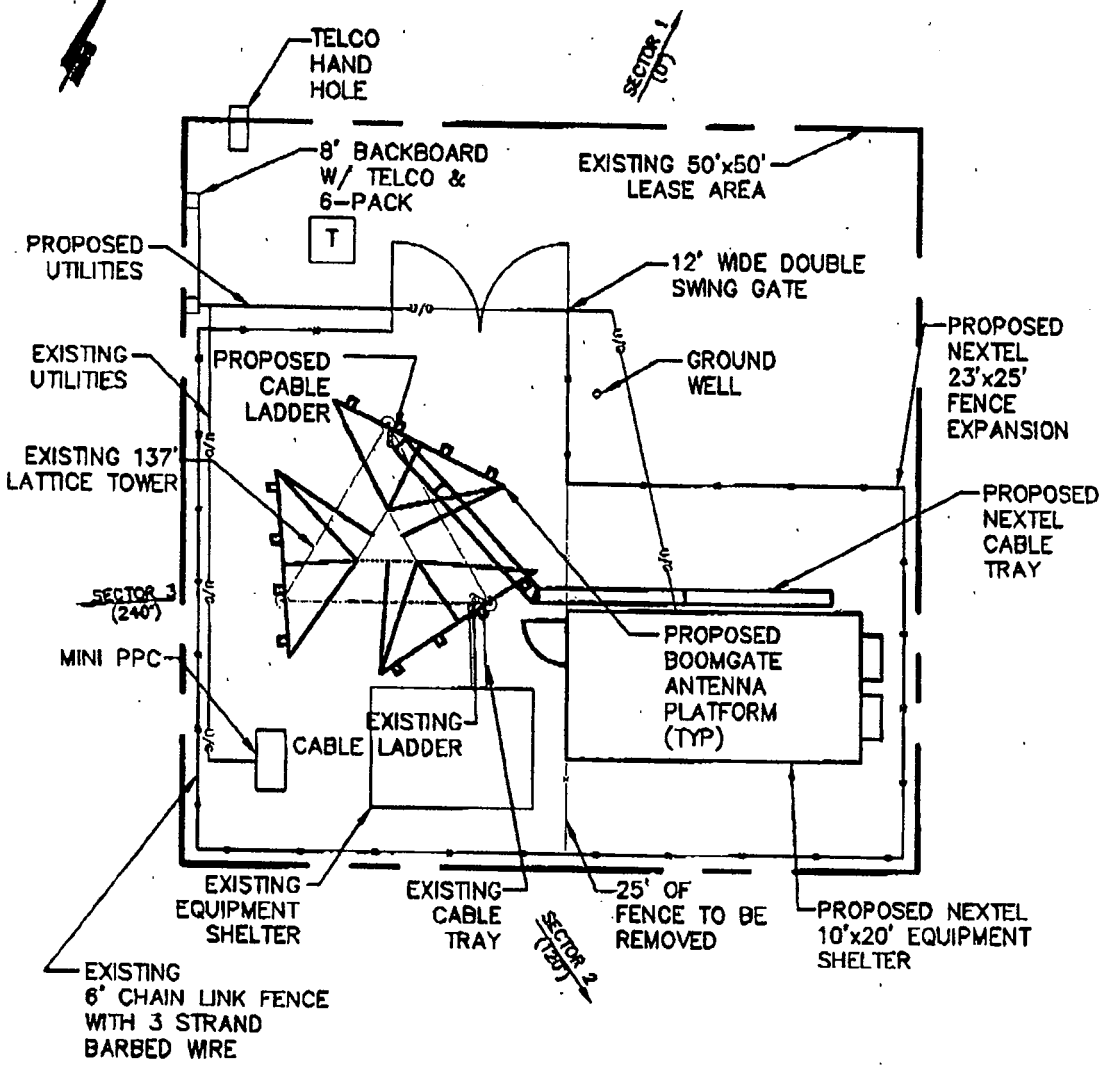
NEXTEL

NEXTEL COMMUNICATIONS SITE #CT-1058
LEASE EXHIBIT
WATERFORD
41 MANITOCK HILL ROAD
WATERFORD, CT

DWG. FILE: WATERFORDLE.DWG | DTC No.: 98-403-830
DRAWN: DEB | DATE: 1-5-00
SCALE: N.T.S. | SHEET 2 OF 2

ATTACHMENT A





SITE PLAN

SCALE: N.T.S.

dtc

DIVERSIFIED TECHNOLOGY CONSULTANTS

NEXTEL

NEXTEL COMMUNICATIONS SITE #CT-1058

LEASE EXHIBIT
WATERFORD
41 MANITOCK HILL ROAD
WATERFORD, CT

DWG. FILE: WATERFORDLE.DWG
DRAWN: DEB
SCALE: N.T.S.
DTC No.: 98-483-930
DATE: 1-5-00
SHEET 1 OF 2

ATTACHMENT B

Waterford, CT - Co-location on an Existing Tower on Manitock Hill Rd.

Sprint Spectrum Directional PCS Antennas - 1957.5 MHz at centerline 137' AGL - Existing

Nextel Communications Directional ESMR Antennas - 851 MHz at centerline 127' AGL - Proposed

Note: Power densities are in mW/cm²

Transmitter:	Frequency in MHz	CT Standard mW/cm²	Total ERP per sector (Watts)	Centerline of Tx antennas AGL (ft)	Power density calculated at the tower base
Sprint Spectrum - PCS	1957.5	1.0	1342	137	0.025697416
Sprint Spectrum - PCS - % of CT Standard					**2.5697%**
Nextel Directional ESMR Antennas	851	0.56733	900	127	0.02005456
Nextel Directional Antennas - % of CT Standard					**3.5349%**
Total % of CT and FCC Standard					**6.1046%**

ATTACHMENT C