



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

August 3, 1999

Julie M. Cashin, Esq.
Hurwitz and Sagalin, LLC
147 North Broad Street
Milford, CT 06460

RE: TS-SPRINT-076-990707 - Sprint PCS and Nextel Communications request for an order to approve tower sharing at a telecommunications tower to be replaced at the North Madison Fire Department on 864 Opening Hill Road in Madison, Connecticut.

Dear Ms. Cashin:

At a public meeting held July 29, 1999, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This approval is conditioned on the development of the proposed facility consistent with local approval(s), as required.

This facility has been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequency now used on this tower. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

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

The proposed-shared use is to be implemented as specified in your letter dated July 7, 1999. Please notify the Council when all work is complete.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/RKE/tsg

cc: Honorable Thomas R. Rylander, First Selectman, Town of Madison
Ronald C. Clark, Manager-Real Estate, Nextel Communications
Steve Kotfila, Site Development Manager, Sprint PCS
Sandy M. Carter, Manager-Regulatory, Bell Atlantic Mobile

FILE
COPY

HURWITZ & SAGARIN LLC

Via Overnight Delivery

July 27, 1999

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

RECEIVED

JUL 28 1999

CONNECTICUT
SITING COUNCIL

RE: TS - Sprint-076-990707 - Sprint PCS and Nextel Communications request for an order to approve tower sharing at a telecommunications tower to be replaced at the North Madison Fire Department on 864 Opening Hill Road in Madison, CT

Dear Chairman Gelston:

In furtherance of the above referenced tower sharing proposal, enclosed please find a letter of authorization which authorizes Sprint Spectrum L.P. ("Sprint PCS") to act on behalf of the North Madison Volunteer Fire Company, Inc. ("NMVFC") to apply for all necessary local, state and federal permits, approvals and authorizations which may be required for the proposed shared use of this facility.

Sincerely,



JULIE M. CASHIN, ESQ.
JMC/dsw

Enclosure

FILE
COPY

LETTER OF AUTHORIZATION

Municipality: North Madison

Tax Assessor's Parcel Number: Map 134 Parcel 18

Re.: **Building Permits and Land Use Approvals**

North Madison VFD, the Owner of 864 Opening Hill Rd (the "Property") does hereby appoint Sprint Spectrum, L.P. ("Sprint") and its agents and representatives as Owner's Agent for the purpose of completing, executing, and/or filing any application, form, map, approval, variance, special permit or other land use approval or building permit ("Approvals") required to provide Sprint with lawful access to, and the ability to use the Property for the purpose of installing, erecting, or otherwise placing antennae, support structures and related equipment on the Property. Owner shall fully cooperate with Sprint and its agents and representatives in obtaining any required Approvals. Sprint shall be responsible for all costs, filing fees, or any expense incurred in connection with securing any approvals.

Property Owner: North Madison Vol. Fire Co., Inc.

By: E. Alletcheuser

Name: Eric Alletcheuser

Its: 1st Lieutenant / Chairman Tower Committee

Date: 7/7/99

STATE OF CONNECTICUT:

COUNTY OF _____ :

Signed and Sworn to before me this 7 th day of July, 1999.

Erin K. Fitzgerald
Notary Public

My Commission expires:

ERIN K. FITZGERALD
NOTARY PUBLIC
MY COMMISSION EXPIRES MAY 31, 2000



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

July 16, 1999

Honorable Thomas R. Rylander
First Selectman
Town of Madison
Madison Town Campus
8 Campus Drive
Madison, CT 06443

RE: TS-SPRINT-076-990707 - **Sprint PCS** and Nextel Communications request for an order to approve tower sharing at a telecommunications tower to be replaced at the North Madison Fire Department on 864 Opening Hill Road in Madison, Connecticut.

Dear Mr. Rylander:

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 Thursday, July 29, 1999, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

Very truly yours,

A handwritten signature in black ink, appearing to read "Joel M. Rinebold".

Joel M. Rinebold
Executive Director

JMR/tsg

Enclosure: Notice of Tower Sharing

TS - Sprint - 070 - 110101

HURWITZ & SAGARIN LLC
Via Hand Delivery

July 7, 1999

RECEIVED

JUL - 7 1999

CONNECTICUT
SITING COUNCIL

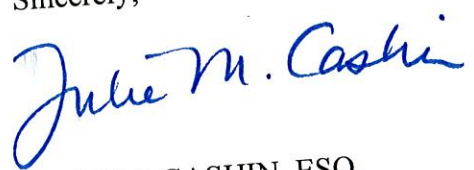
Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Dear Chairman Gelston:

On behalf of the applicants, Sprint Spectrum L.P. ("Sprint PCS"), as agent of the North Madison Volunteer Fire Company, Inc. ("NMVFC"), and Nextel Communications of the Mid-Atlantic, Inc., ("Nextel") I am pleased to submit this application for a Tower Sharing Proposal for the NMVFC facility located at 864 Opening Hill Road, Madison, Connecticut.

Enclosed are one (1) original and twenty (20) copies of this Tower Sharing Proposal requesting shared use of this facility. A check in the amount of \$500.00 to cover the filing fee is also enclosed. The First Selectman of the Town of Madison has been sent notice of this Tower Sharing Proposal by certified mail.

Sincerely,



JULIE M. CASHIN, ESQ.
JMC/dsw

Enclosures

HURWITZ & SAGARIN LLC

July 7, 1999

Thomas Rylander
First Selectman
Town of Madison
8 Campus Drive
Madison, Connecticut 06443

RECEIVED

JUL - 7 1999

CONNECTICUT
SITING COUNCIL

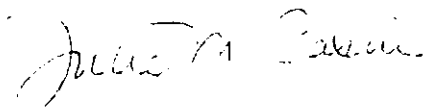
Re: 864 Opening Hill Road, Madison

Dear First Selectman Rylander:

Sprint Spectrum, L.P. ("Sprint PCS") and Nextel Communications of the Mid-Atlantic, Inc. ("Nextel") submitted a joint tower sharing proposal to the Connecticut Siting Council ("Council") on July 7, 1999. Sprint PCS and Nextel request the Council issue an order approving the shared use of the North Madison Volunteer Fire Company, Inc. facility located at 864 Opening Hill Road, Madison. This proposed towersharing application is consistent with the State of Connecticut legislative finding and purpose of avoiding the unnecessary proliferation of towers by using existing structures wherever feasible.

Enclosed is a copy of the petition submitted to the Council for your review. Please feel free to call me at (203) 877-8000 if you have any questions regarding this proposal. Please direct any questions you may have regarding the review process to the staff at the Council at (860) 827-2935.

Very truly yours,



JULIE M. CASHIN

JMC/dsw

Enc.

cc: Joel Rinebold, Connecticut Siting Council
Steve Kotfila, Sprint PCS
Steve Crotty, Nextel Communications

Application of Sprint PCS and Nextel
to the Connecticut Siting Council
for a Tower Sharing Proposal for the
facility located at the North Madison
Volunteer Fire Company, Inc.
864 Opening Hill Road, Madison, Connecticut

RECEIVED

JUL - 7 1999

CONNECTICUT
SITING COUNCIL

Dated: July 7, 1999 in Milford, CT

Introduction

Sprint Spectrum, L.P. ("Sprint PCS") and Nextel Communications of the Mid-Atlantic, Inc. ("Nextel") seek to share the North Madison Volunteer Fire Company Inc. ("NMVFC") tower located at 864 Opening Hill Road, Madison, Connecticut. Sprint PCS and Nextel hereby request a finding from the Connecticut Siting Council ("Council") that the shared use of this facility is technically, legally, environmentally and economically feasible and meets public safety concerns in accordance with Section 16-50aa of the Connecticut General Statutes ("C.G.S.").

Background

The proposed site is owned by the NMVFC and is located at 864 Opening Hill Road, Madison, Connecticut ("Site") (see location map attached as Exhibit B at Page T-1). The Site currently supports a 150-foot steel lattice tower ("Existing Tower") and appurtenant equipment building(s). The Existing Tower is scheduled for replacement. A request for modification of Special Exception Permit to allow the construction of a 180-foot replacement tower ("Replacement Tower"), a 12-foot by 30-foot equipment building and installation of an emergency generator was approved by the Madison Planning and

Zoning Commission on April 17, 1997 (see approval letter attached hereto as Exhibit C). The Madison Planning and Zoning Commission subsequently approved the location of Sprint PCS' and Nextel's base station equipment within the confines of the expanded compound on May 20, 1999. (See approval letter dated May 24, 1999 attached hereto as Exhibit D).

Tower Sharing Proposal

The purpose of this Tower Sharing Proposal¹ is to utilize an existing facility rather than construct a new tower in the Town of Madison. This site is the only viable co-location opportunity for Sprint PCS and Nextel in the area. Sprint PCS and Nextel have entered into lease agreements with the NMVFC for placement of antennas with associated equipment.

A. NMVFC Tower as a Facility

For the purposes of this Tower Sharing Proposal and pursuant to Section 16-50aa of the Connecticut General Statutes, "... Facility means a tower owned or operated for a commercial or public purpose by a person, firm, corporation or a public agency which uses such tower for transmitting or receiving signals in the electromagnetic spectrum pursuant to a Federal Communications Commission license." The NMVFC tower currently supports antenna for Bell Atlantic Mobile (BAM) and Springwich Cellular Limited Partnership, as well as the NMVFC and the Madison Police Department.

¹ Narrative and form attached as Exhibit A constitute this Tower Sharing Proposal.

B. Project Description

1. SPRINT PCS

Sprint PCS is licensed by the Federal Communications Commission (“FCC”) to provide PCS wireless service throughout the State of Connecticut, including the Madison area.

Sprint proposes to install as many as nine (9) antennas on the Replacement Tower at the 150-foot level and a small global positioning system (GPS) antenna at the 75-foot level (see Tower Elevation attached hereto as Exhibit B at Page SC-2). A low profile platform, with PCS antennas mounted on the platform, will be attached to the Replacement Tower with an antenna rad center of 150-feet. Sprint PCS, proposes to use Decibel Products antenna model DB980H90(E)-M which measure 60 inches high by 6.1 inches wide by 2.8 inches deep (see antenna specifications attached hereto as Exhibit E).

The base station equipment associated with these antennas would be located within the compound area, in accordance with the approval issued by the Madison Planning and Zoning Commission dated May 20, 1999.

2. NEXTEL

Nextel is licensed by the FCC to provide Specialized Mobile Radio (“SMR”) wireless service throughout the State of Connecticut, including the Madison area.

Nextel proposes to install as many as twelve (12) antennas on the Replacement Tower at the 160-foot level and a small global positioning system (GPS) antenna at the 75-foot level (see Tower Elevation attached as Exhibit B at

Page SC-2). A low profile platform, with SMR antennas mounted on the platform, will be attached to the Replacement Tower with an antenna rad center of 160-feet.. Nextel, proposes to use Decibel Products antenna model DB844H90N-XY which measure 48 inches high by 6 inches wide by 8.5 inches deep (see antenna specifications attached hereto as Exhibit F).

The base station equipment associated with these antennas would be located within the compound area, in accordance with the approval issued by the Madison Planning and Zoning Commission dated May 20, 1999.

C. Compliance with C.G.S. § 16-50aa

Pursuant to C.G.S. § 16-50aa, “The General Assembly finds that the sharing of towers for fair consideration whenever technically, legally, environmentally and economically feasible, and whenever such sharing meets public safety concerns, will avoid the unnecessary proliferation of towers and is in the public interest.” A discussion of how the proposed co-location by Sprint PCS and Nextel will be in conformance with C.G.S. § 16-50aa is outlined below:

1. *Technical Analysis*

Sprint PCS and Nextel have reviewed the technical parameters of the existing communications facilities and determined it is extremely unlikely that the proposed Sprint PCS, and Nextel antennas will result in interference due to the sectorized positioning of the antenna, vertical separation, and low power. Sprint PCS, and Nextel do not intend to cause interference, and will correct any interference in the unlikely event that it does occur.

The Replacement Tower was designed to accommodate six (6) carriers. As indicated on Tower Configuration attached hereto as Exhibit G, the tower was designed to accommodate carriers at heights of 178, 170, 160, 150, 140 and 130 feet AGL. As discussed above, Sprint PCS proposes to locate at the 150-foot level and Nextel proposes to locate at the 160 foot level.

2. *Legal Feasibility*

Sprint PCS and Nextel have entered into a lease agreement with the NMVFC for the purposes of locating antenna on the Replacement Tower and associated equipment adjacent to the base of the Replacement Tower. The Council has the authority pursuant to C.G.S. §16-50aa to issue orders approving the proposed shared use of the Replacement Tower by Sprint PCS and Nextel.

3. *Environmental Feasibility*

The proposed shared use would have a minimal environmental effect for the following reasons:

- This proposed shared use will not increase the tower height as approved by the Madison Planning and Zoning Commission. Sprint PCS and Nextel antennas will be installed below the approved height of 180 feet.
- This proposed shared use will not expand the compound area beyond that already approved by the Town of Madison. The proposed installations by Sprint PCS and Nextel will have an insignificant visual impact and will not cause any significant change or alteration in the physical or environmental characteristics of the Site.

- This proposed shared use will not increase noise levels at the Replacement Tower site boundary by six decibels.
- This proposed shared use, including operation of the Sprint PCS and Nextel antennas, as well as the change in the SNET antennas, will not increase the total radio frequency electromagnetic radiation of the power density measured at the Site to or above the standard adopted by the Federal Communications Commission. An engineering exhibit attached as Exhibit H lists the calculated worst case power density at the base of the Replacement Tower.
- The proposed installations by Sprint PCS and Nextel will not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is complete, the proposed Sprint PCS and Nextel installations will not generate any traffic other than periodic maintenance visits.

The proposed shared use of the Replacement Tower by Sprint PCS and Nextel will have a minimal environmental effect, and is therefore environmentally feasible.

Economic Feasibility

As previously mentioned, Sprint PCS and Nextel have agreed upon acceptable terms and entered into a lease agreement with the NMVFC². The proposed shared use of the Replacement Tower is therefore economically feasible.

² Access and utility rights are outlined in the respective lease agreements.

Public Safety Concerns

There are no known public safety concerns associated with this Tower Sharing Proposal.

As stated above, the Replacement Tower will be structurally capable of supporting Sprint PCS and Nextel antennas. Sprint PCS and Nextel anticipate that the provision of new or improved phone service made possible by the shared use of the Replacement Tower will enhance the safety and welfare of area residents.

Conclusion

The above Tower Sharing Proposal satisfies all of the criteria set forth in Section 16-50aa of the Connecticut General Statutes, including technical, legal, environmental and economic feasibility, and meets public safety concerns. Sprint PCS and Nextel respectfully request that the Council issue an order approving the proposed shared use.

TELECOMMUNICATIONS TOWER SHARING PROPOSAL

FILING DATE: 7/7/99

Pursuant to section 16-50aa of the Connecticut General Statutes (CGS), this form is to be used to initiate telecommunications tower sharing proposals between two parties. The full text of section 16-50aa of the CGS is attached. All information is to be provided by the requesting party after consultation with the tower owner, property owner, and other appropriate persons. Any type of information that cannot be obtained due to an uncooperative tower owner, property owner, or other persons should be so identified in this form.

REQUESTING PARTY: Sprint Spectrum L.P. as agent for North Madison Volunteer Fire Company, Inc.

ADDRESS: Crossroads Corporate Center, 1 International Blvd., Suite 800, Mahwah, NJ 07495

REPRESENTED BY: Julie M. Cashin, Esq., Hurwitz & Sagarin, LLC
TELEPHONE: 203-877-8000

ADDRESS: 147 North Broad Street, Milford, Connecticut 06460

SECOND REQUESTING PARTY: Nextel Communications of the Mid-Atlantic, Inc.

ADDRESS: 100 Corporate Place, Rocky Hill, Connecticut 06067

REPRESENTED BY: Julie M. Cashin, Esq., Hurwitz & Sagarin, LLC
TELEPHONE: 203-877-8000

ADDRESS: 147 North Broad Street, Milford, Connecticut 06460

TOWER AND PROPERTY OWNER: North Madison Volunteer Fire Company, Inc.
TELEPHONE:

ADDRESS: 864 Opening Hill Road, N. Madison, Connecticut 06443

REPRESENTED BY:

TELEPHONE:

ADDRESS:

PROPOSED SERVICE:

SEE NARRATIVE

SUMMARY OF PROPOSED ACTION:

SEE NARRATIVE

PROPOSED EQUIPMENT:

ANTENNA 1:

SPRINT SPECTRUM L.P.

Type:

Decibel Products - DB980H90(E) - M

Azimuth and location (height) on tower:

30,150,240 @ 150 Ft. AGL

Description:

(9) Panel Antenna 60" H x 6.1" W x 2.8" D; (1) Global Positioning Antenna (GPS) antenna

Frequency, emission type, transmit power, and wave length:

1950 MHz, PCS B Band Carrier, 122 Watts ERP per Transmitter, 0.15 Meters

ANTENNA 2:

NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.

Type:

Decibel Products antenna model DB844H90N-XY; (1) GPS antenna

Azimuth and location (height) on tower:

30,150,270 @ 160 Ft. AGL

Description:

(12) Panel Antenna 48" H x 6" W x 8.5" D

Frequency, emission type, transmit power, and wave length:

851MHz, ESMR/TDMA, 100 Watts ERP per transmitter, 1.16 feet

ANTENNA 3: N/A

ANCILLARY EQUIPMENT (Example: Equipment Building):

Sprint: 10 x 22 steel frame equipment platform with BTS equipment.

Nextel: 10 x 20 prefabricated equipment shelter.

***TECHNICAL ANALYSIS: (Example: Frequency Coordination and Tower Loading)**

SEE NARRATIVE

LEGAL ANALYSIS: (Example: Access and Maintenance Responsibility)

SEE NARRATIVE

ENVIRONMENTAL ANALYSIS: (Example: Visibility and Calculated or Measured Power Densities at Site Boundaries)

SEE NARRATIVE

***ECONOMIC ANALYSIS: (Example: Project Cost, Proposed Compensation, and Financial Condition of the Applicant)**

SEE NARRATIVE

PUBLIC SAFETY ANALYSIS: (Example: Site Security and Tower Lighting and Marking)

SEE NARRATIVE

This filing shall be completed by the requesting party, if possible in consultation with the tower owner and property owner, and filed with the Connecticut Siting Council (Council) at the same time it is served to the tower owner and property owner. The tower owner, property owner, and other interested parties may respond to this proposal form with service to the Council and all other parties within 30 days of the filing of this form.

TELECOMMUNICATIONS TOWER SHARING PROCEDURE:

1) File completed Telecommunications Tower Sharing Proposal Form.

If necessary, request arbitration by the Council.

2) If necessary, formally request a feasibility proceeding by the Council.

Notice of public hearing within 30 days after formal request for feasibility proceeding.

Public hearing within 90 days after formal request for feasibility proceeding.

Council decision within 180 days after formal request for feasibility proceeding.

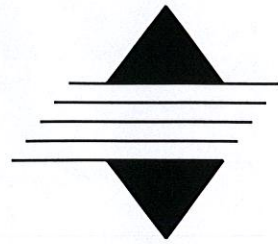
3) If necessary, initiate arbitration to determine compensation within 90 days of the Council's

decision of feasibility or disagreement by parties regarding fair compensation.

4) If necessary, initiate court action to determine compensation.

*Exclude from public submittal if confidential or proprietary.

Connecticut General Statutes Section 16-50aa



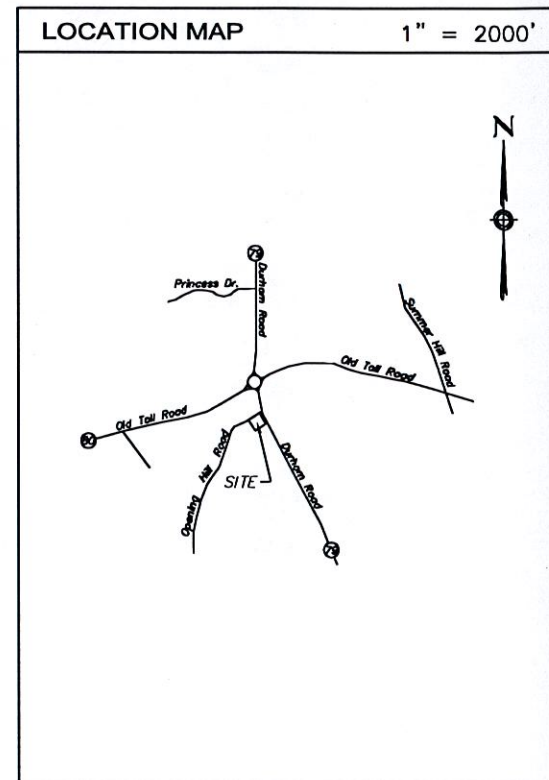
Sprint PCS

NEXTEL

SPRINGWICH CELLULAR LIMITED PARTNERSHIP

NORTH MADISON VOLUNTEER FIRE COMPANY

OPENING HILL ROAD MADISON, CONNECTICUT



PROJECT SUMMARY

SITE NAME: NORTH MADISON VOLUNTEER FIRE CO.

SITE ADDRESS: OPENING HILL ROAD
MADISON, CONNECTICUT

SITE PARCEL NO.: MAP 134/PARCEL 18

DEED BOOK / PAGE: 196/851

GOVERNING CODE: CONNECTICUT BUILDING AND LIFE SAFETY CODE

JURISDICTION: TOWN OF MADISON

APPLICANT: SPRINT PCS
9 BARNES INDUSTRIAL ROAD
WALLINGFORD, CT. 06492
(203) 294-5600

NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.
DBA NEXTEL COMMUNICATIONS
100 CORPORATE PLACE
ROCKY HILL, CT. 06067
(860) 513-5400

SPRINGWICH CELLULAR LIMITED PARTNERSHIP
500 ENTERPRISE DRIVE
ROCKY HILL, CT. 06067
(860) 513-7730

ARCHITECT: URS GREINER WOODWARD-CLYDE, INC. A.E.S.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
(860) 529-8882

M/E/P ENGINEER: URS GREINER WOODWARD-CLYDE, INC. A.E.S.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
(860) 529-8882

SURVEYOR: URS GREINER WOODWARD-CLYDE, INC. A.E.S.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
(860) 529-8882

SHEET INDEX

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
SC-1	SITE PLAN
SC-2	SITE MODIFICATION PLAN AND TOWER ELEVATION

Sprint PCS

NEXTEL SNET

A/E FIRM
URS Greiner Woodward Clyde A-E-S
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882



PROJECT NO: F301772.36/F03

DRAWN BY: RFD

CHECKED BY:

ISSUED FOR	
06-09-99	REVIEW
06-30-99	SITING COUNCIL

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CARRIER IS STRICTLY PROHIBITED.

NORTH MADISON VOLUNTEER FIRE COMPANY
OPENING HILL ROAD
MADISON, CT

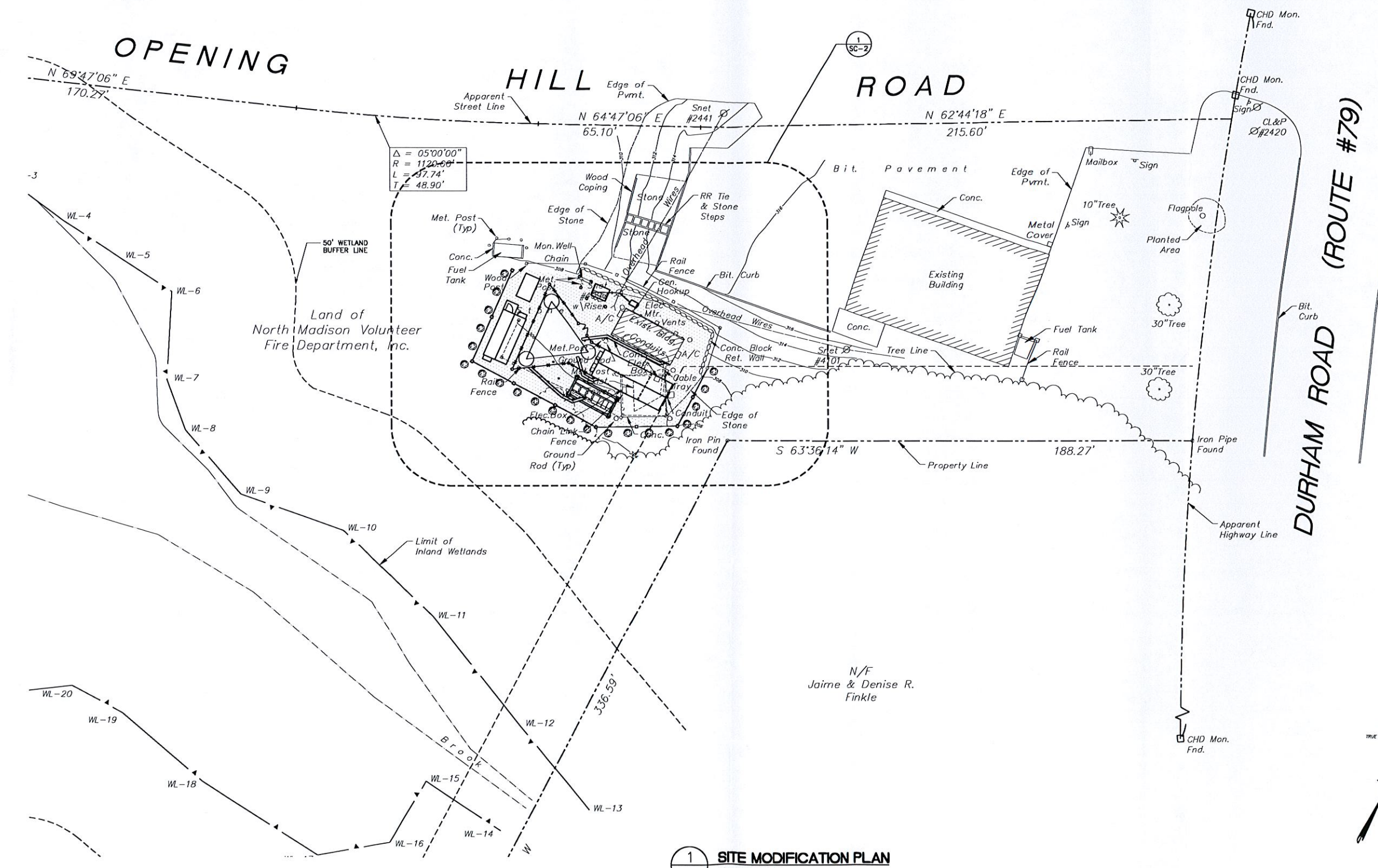
SCALE: NONE

DATE: 06-09-99

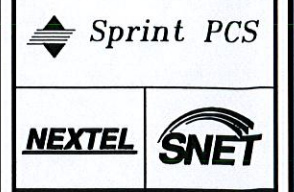
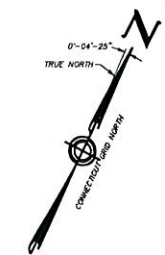
DRAWING 1 OF 3

TITLE SHEET

T-1



1 SITE MODIFICATION PLAN
 SCALE: 1"=20'-0"



A/E FIRM
URS Greiner Woodward Clyde
 A-E-S
 500 ENTERPRISE DRIVE
 ROCKY HILL, CONNECTICUT
 1-(860)-529-8882



PROJECT NO: F301772.36/F03

DRAWN BY: RFD

CHECKED BY:

ISSUED FOR	
06-09-99	REVIEW
06-30-99	SITING COUNCIL

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CARRIER IS STRICTLY PROHIBITED.

NORTH MADISON VOLUNTEER FIRE COMPANY
 OPENING HILL ROAD
 MADISON, CT

SCALE: AS SHOWN

DATE: 06-09-99

DRAWING 2 OF 3

SITE PLAN

SC-1



PROJECT NO: F301772.36/F03

DRAWN BY: RFD

CHECKED BY:

ISSUED FOR	
06-09-99	REVIEW
06-30-99	SITING COUNCIL

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CARRIER IS STRICTLY PROHIBITED.

NORTH MADISON VOLUNTEER FIRE COMPANY

OPENING HILL ROAD
 MADISON, CT

SCALE: AS SHOWN

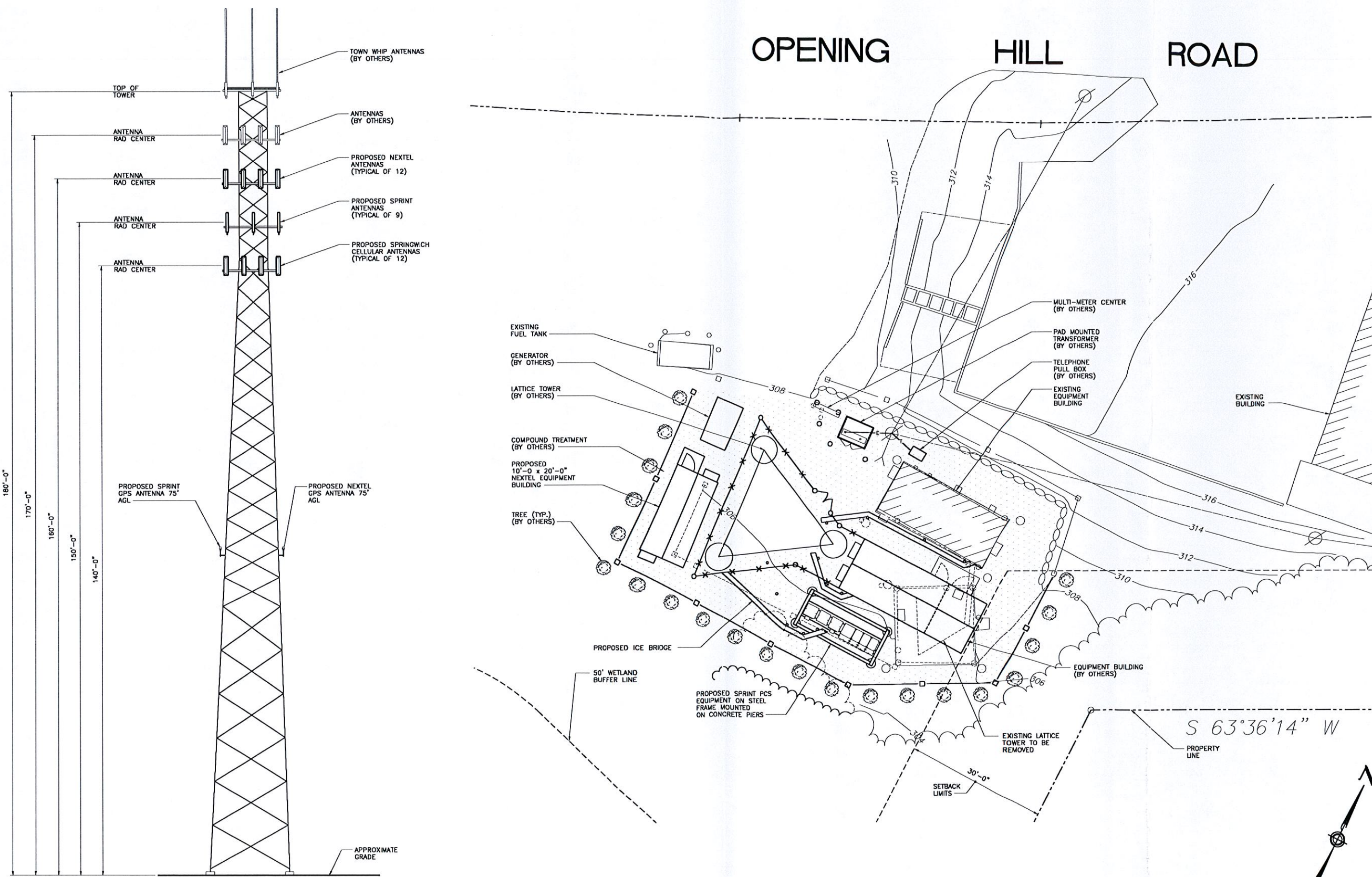
DATE: 06-09-99

DRAWING 3 OF 3

SITE MODIFICATION PLAN AND TOWER ELEVATION

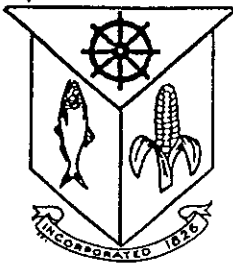
SC-2

OPENING HILL ROAD



2 TOWER ELEVATION
 SCALE: 1"=15'-0"

1 SITE MODIFICATION PLAN
 SCALE: 1"=10'-0"



TOWN OF MADISON
CONNECTICUT
LAND USE OFFICE

8 CAMPUS DRIVE
MADISON, CONNECTICUT 06443-2563
(203) 245-5632
FAX (203) 245-5613

MADISON PLANNING AND ZONING COMMISSION
CERTIFICATION OF SPECIAL EXCEPTION PERMIT OR
MODIFICATION OF SPECIAL EXCEPTION PERMIT

APPL. NO.: 97-5D

DATE OF APPROVAL: April 17, 1997

This certifies that on the above date a MODIFICATION OF SPECIAL EXCEPTION PERMIT was granted by the Madison Planning and Zoning Commission to:

OWNER OF RECORD: North Madison Volunteer Fire Department

under the provisions of Sec. 4.7 of the Zoning Regulations of the Town of Madison on property located at:

STREET ADDRESS OR LOCATION: 864 OPENING HILL ROAD

TO ALLOW: Construction of a 180 ft. communications tower to replace existing tower, installation of equipment building and emergency back-up generator waiving requirements of 1) a traffic study; 2) a waste water report and engineering study; and 3) final floor plans for the equipment building. The temporary installation of the "Cell on Wheels" was also approved. This approval is conditioned on plastic slats being placed in the chain link fence to obscure the view of the materials enclosed.

In accordance with Section 4.6 of said Regulations, this approval and permit are conditioned upon completion of all proposed improvements in accordance with approved plans within five years from date of approval, and shall become null and void in the event of failure to complete such improvements within said five year period or any extension thereof granted by the Commission.

Appl.: Owner

William B. Bilcheck
Chairman, Planning and Zoning Commission

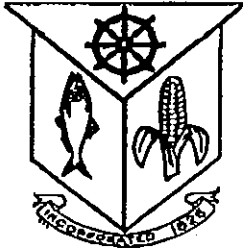
Received for Record _____, 19____

at _____ h _____ m

Signature of Town Clerk

Copy filed May 30, 1997

FRM.SEPERMIT 6/91



TOWN OF MADISON
CONNECTICUT
LAND USE OFFICE

8 CAMPUS DRIVE
MADISON, CONNECTICUT 06443-2563
(203) 245-5632
FAX (203) 245-5613

May 24, 1999

CERTIFIED MAIL

North Madison Volunteer Fire Company, Inc.
864 Opening Hill Road
Madison, CT 06443

Re: Application #99-26D: 864 OPENING HILL ROAD. Request for Modification of Special Exception Permit to allow relocation of the site for emergency generator, enlarge the fenced compound, change the style of the fence, add landscaping and permit Nextel Communications and Sprint PCS to install radio equipment shelters inside the enlarged compound.

Gentlemen:

At their regular meeting on May 20, 1999, the Planning and Zoning Commission approved the application above referenced as presented at the meeting.

Before this Modification of Special Exception Permit will become effective, it is necessary to file a Certificate in the Land Records of the Town for which there is a \$10.00 filing fee. At your earliest convenience, please forward this amount to our office so that we may file this Certificate in your behalf. Your check should be made payable to the Town of Madison.

When this Certificate is filed at the end of the appeal period, you may apply for building permits through normal Building Department procedures.

Very truly yours,

A handwritten signature in cursive script that reads "William H McMinn".

William McMinn
Planning and Zoning Administrator

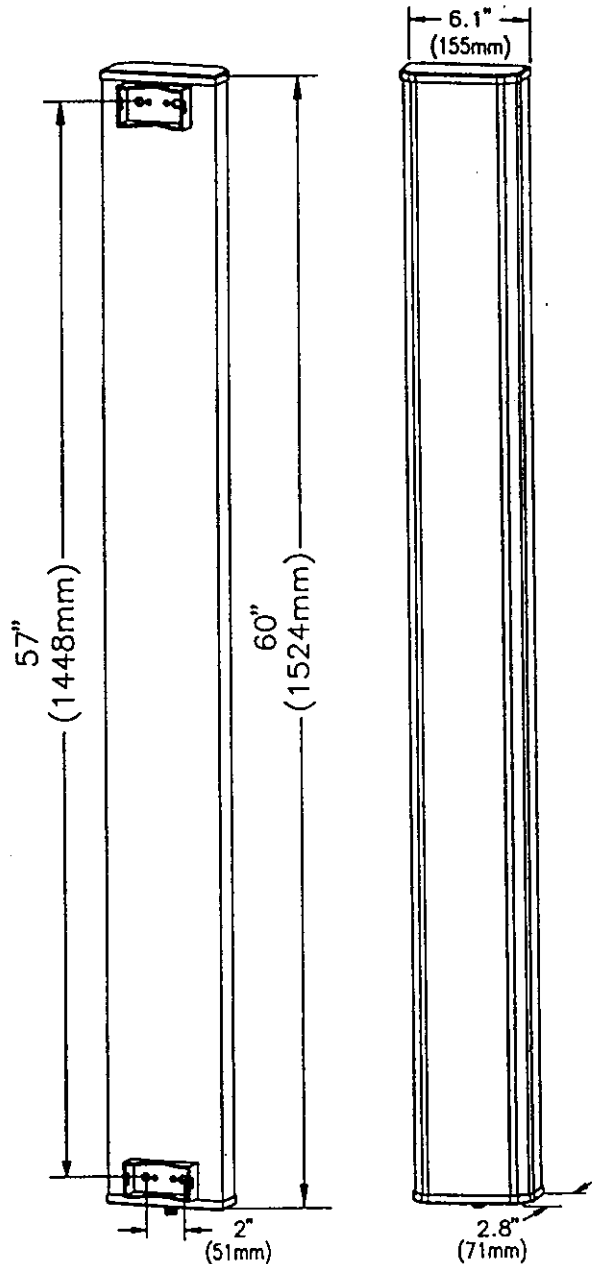
: drk

Copy to: Ronald C. Clark, Nextel Communications

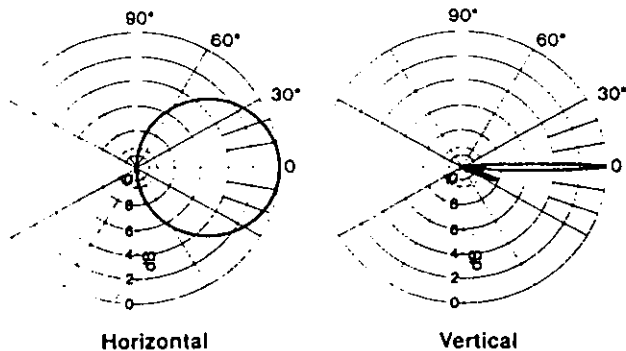
DB980H90(E)- { -KL: 1710-1880 MHz -M: 1850-1990 MHz

90°, 15 dBd Directional Antenna

Model Number	DB980H90-KL/M	DB980H90E-KL/M
Termination	Type N-Female	7/16 DIN
Frequency Range	-KL: 1710 - 1880 MHz -M: 1850 - 1990 MHz	
Gain	15 dBd or 17.1 dBi	
Null Fill	First lower null is less than 18 dB down from max. First upper side lobe suppressed.	
VSWR	< 1.5:1	
Beamwidth (3dB from max)	Horizontal 90° ± 7.0° Vertical 5.5° ± 0.5°	
Front to Back Ratio	>25 dB	
Polarization	Vertical	
Max. Input Power	250 Watts	
Application	PCN, PCS, DCS1800	
Weight	8.5 lbs (4.0 kg)	
Wind Area	2.5 ft² (.24 m²)	
Wind Load	101.7 lbf (452.2N) 45.7 kp (at 100 mph)	
Max. Wind Speed	165 mph (260 km/h)	
Material	Reflector Screen: Pass. Aluminum Radiators: Brass Radome: PVC, UV Resistant Mtg. Hardware: Pass. Aluminum, Stainless Steel	
Color	Normal: Gray	
Mounting	Band clamps included.	
Downtilt Brackets (Optional)	DB5095	
Weather Protection	Fully protected by backplate and radome.	
Lightning Protection	All metal parts grounded.	
Packing Size	72" x 7" x 6"	
Shipping Weight	13.2 lbs (6 kg)	



Antenna Patterns



15 dBd (17.1 dBi) Gain Directional Antenna with 90° horizontal 3 dB beamwidth -KL: 1710-1880 MHz or -M: 1850-1990 MHz.

099045-000-H 12/95



DECIBEL PRODUCTS
A Division of the ALLEN TELECOM GROUP

8635 Stemmons Freeway • P. O. Box 569610 • Dallas, Texas 75356-9610
214 / 631-0310 • Fax: 214 / 631-4706





DB842H80N-XY, DB842H90N-XY dB DIRECTOR™ LOG PERIODIC ANTENNAS
DB844H80N-XY, DB844H90N-XY 9-13 dBd GAIN, 40 dB F/B RATIO, 806-960 MHz



Base Station Antennas

Ideal for cellular and trunking/ESMR applications, these high quality log periodics are now available from Decibel in four new models with 80 or 90 degree horizontal apertures. They're compact, lightweight, and provide an unmatched front-to-back ratio of 40 dB.

- **Less Wind Loading** - They measure only 24 or 48 inches (610 or 1219 mm) tall, 8.5 inches deep (216 mm), and 6 inches wide (152 mm). They weigh only 5 or 10 pounds.
- **Downtilt** - Electrical downtilt is available on all 4-foot models, 6°, 8°, 11°, 13°, or for mechanical downtilt, order DB5083 bracket.
- **Null-Fill** - Four-foot models provide null-fill and upper lobe suppression.
- **Most Stringent IM Test** - Each antenna is tested for the absence of IM with 16 carriers at 500 watts of composite power.
- **Sturdy Construction** - Made in the U.S. of high-strength aluminum alloy backs, brass elements and UV resistant ABS plastic radomes. No rivets are used!
- **Lightning Resistant** - All metal parts are grounded.
- **Terminations and Mounts** - All models are available with N-Female or 7/16 DIN connectors. DB380 pipe mount is included.

UPS Shippable

Ordering information - See table for models to fit your requirements.

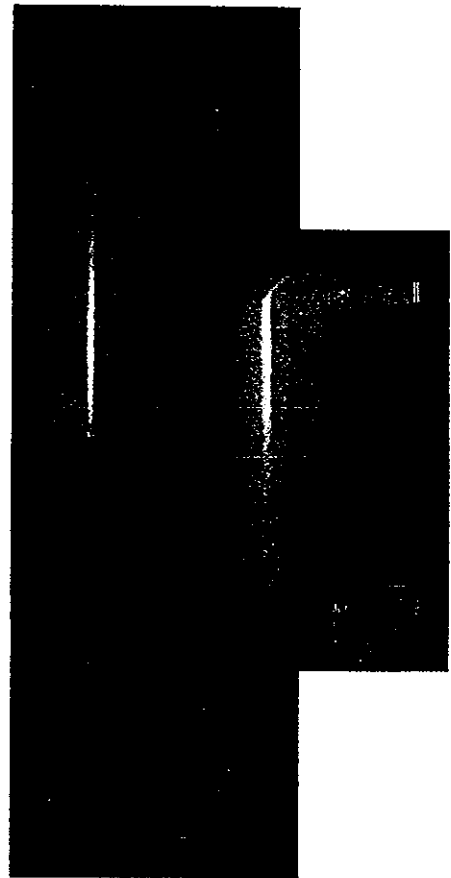
Models Available

Model*	DB842H80N-XY	DB844H80N-XY	DB842H90N-XY	DB844H90N-XY
Gain - dBd/dBi	10/12.1	13/15.1	9/11.1	12/14.1
F/B Ratio - dB	40	40	40	40
Horizontal beamwidth**	80°	80°	90°	90°
Vertical beamwidth**	30°	15°	30°	15°
Height - in. (mm)	24 (610)	48 (1219)	24 (610)	48 (1219)
Weight - lbs. (kg)	5 (2.3)	10 (4.6)	5 (2.3)	10 (4.6)
Shipping weight - lbs. (kg)	8 (3.6)	15 (6.8)	8 (3.6)	15 (6.8)

* For 7/16 DIN connectors substitute "E" for "N" in the model numbers. Example: DB842H80E-XY.

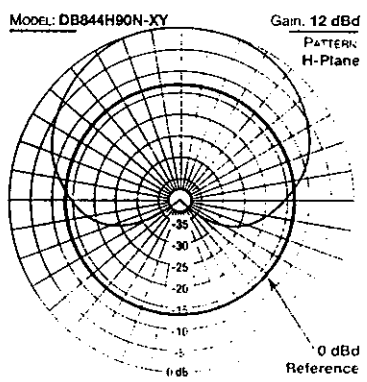
** 3 dB from maximum.

Side offset mounting bracket is included. For electrical downtilt of 6°, 8°, 11° or 13° add T6, T8, T11 or T13 before the "N" or "E" in any 4-foot model number. Example: DB844H80T6N-XY. Note: Electrical downtilt causes a gain loss of .05 dB, or, at the horizon, a reduction of 3, 6, 9 or 12 dB on downtilts of 6°, 8°, 11° or 13° respectively. For mechanical downtilt order DB5083 bracket.



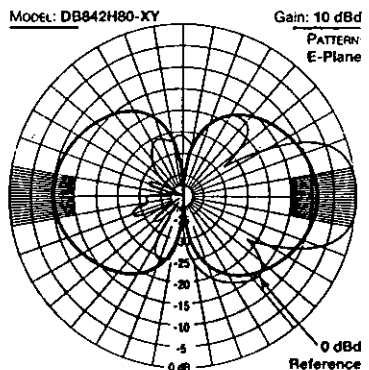
4-Foot and 2-Foot dB DIRECTORS

Typical DB842H90N-XY, DB844H90N-XY Horizontal Pattern

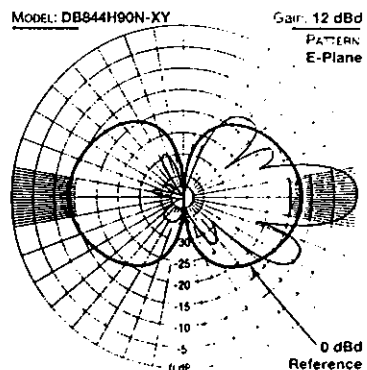


Electrical Data	
Frequency Range - MHz	806-960
Gain - dBd	See table above
Front-to-back ratio - dB	>40
Beamwidths	See table above
VSWR	<1.5:1
Null-fill and secondary lobe suppression	On 48" (1219 mm) models only
Maximum power input - watts	500
Nominal impedance - ohms	50
Lightning protection	All metal parts grounded
Termination	N-Female or 7/16 DIN

Typical DB842H80-XY Vertical Pattern



Typical DB844H90N-XY Vertical Pattern



Mechanical Data	
Width - in. (mm)	6 (152)
Depth - in. (mm)	8.5 (216)
Height	See table above
Maximum wind speed - mph (km/h)	125 (200)
Wind area - ft² (m²)	
24" (610 mm) antenna	1 (.093)
48" (1219 mm) antenna	2 (.186)
Wind load (at 100 mph/161 km/h) - lbf (N) kp	
24" (610 mm) antenna	40 (178) 18
48" (1219 mm) antenna	80 (356) 36
Radome	Gray ABS
Backplate	Passivated aluminum
Radiators	Brass
Mounting hardware	Galvanized steel
Weight	See table above

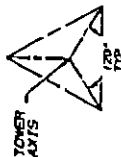


TOWER DESIGN LOADING

DESIGN WIND LOAD PER ANSI/TIA/EIA-222-F-1996,
90 MPH BASIC WIND SPEED CONCURRENT WITH 1/2"
RADIAL ICE LOAD.

THIS TOWER IS DESIGNED TO SUPPORT THE FOLLOWING LOADS:

ELEVATION (FT.)	ANTENNA TYPE	E.P.A. (SF)	LINE SIZE
178	(3) PDSS W/(3) 6' SIDE ARMS	39.4 TOTAL	
170	(12) ALP212 W/(3) 15' LEG MOUNTING FRAMES	139.4 TOTAL	
160	(12) ALP212 W/(3) 15' LEG MOUNTING FRAMES	139.4 TOTAL	
150	(12) ALP212 W/(3) 15' LEG MOUNTING FRAMES	139.4 TOTAL	(6J) 1-5/8"
140	(12) ALP212 W/(3) 15' LEG MOUNTING FRAMES	139.4 TOTAL	
130	(12) ALP212 W/(3) 15' LEG MOUNTING FRAMES	139.4 TOTAL	



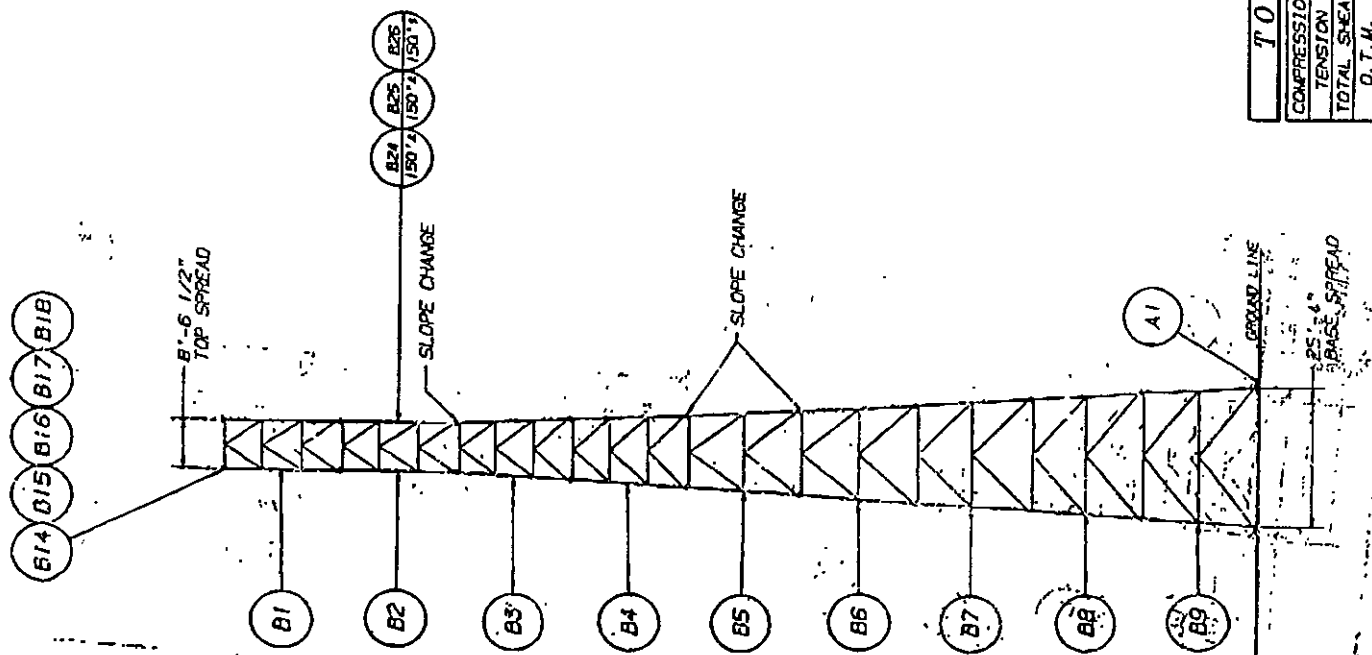
TOWER CONFIGURATION
N.T.S.

FOR GENERAL NOTES SEE ENG. NO.: C7981756.1-2
FOR BILL OF MATERIAL SEE ENG. NO.: C8981756.1-2

TOWER SITE: MADISON
COUNTY, NEW HAVEN, CT.

No. A Revision Descr. Date		A Desc. A Rev. D. A. G. B. D. A. G. B. D. A. G. B.	
THIS DRAWING IS THE PROPERTY OF ROHN. IT IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF ROHN.			
Series Code	Dr	Date	ROHN
Drawn	JPM	11-18-98	
Checked	LLK	11/02/98	
App. Eng.	TS	11/2/98	
Permit File	35190AE		DES. FILE: 35190AE
180' SSM TOWER ASSEMBLY FOR BELL ATLANTIC MOBILE			ENG. NO.: C981756 SHEET 1 OF 1

MADISON



TOWER REACTIONS

COMPRESSION	517.1 KIPS
TENSION	441.2 KIPS
TOTAL SHEAR	89.5 KIPS
O. T. M.	10200.9 FT.-KIPS

General Power Density

Site Name: North Madison Fire Department
 Tower Height: Overall Tower Height = 180 feet

Operator	Operating Frequency (MHz)	Distance to Target (feet)	Calculated Power Density (mW/cm ²)	Maximum Permissible Exposure* (mW/cm ²)	Fraction of MPE (%)
BAM	870-880	150 ^a	0.05640	0.583	9.67%
SNET	880	140	0.14930	0.5867	25.45%
Fire Co.		150 ^b	0.01090	0.2	5.45%
Police Dept.		150 ^b	0.01100	0.3023	3.64%
Sprint PCS	1950-1965	150	0.02089	1	2.09%
Nextel	851	160	0.01240	0.56733	2.19%
Total Percentage of Maximum Permissible Exposure					48.49%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm² = milliwatts per square centimeter

ERP = Effective Radiated Power

^a BAM's antennas will be located at the 170' level on the new tower. The above power density calculation was submitted to the Siting Council with BAM's prior and was calculated assuming an antenna height of 150'. These power density levels will decrease with the increase in height on the new 180' tower.

^b The Fire Company and Police Department antennas will be located at the top of new 180' tower, but the exact location and configuration of these antennas has not yet been determined. The power density calculations for the fire and police antennas are for the existing fire and police antennas on the 150' tower and were submitted to the Siting Council with Springwch and BAM's prior filings. These power density levels will decrease with an increase in height of the antenna on the new 180' tower.