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

May 29, 2001

Dawn Holmes
SNET
310 Orange Street, 6th floor
New Haven, CT 06510

RE: **EM-SNET-078-010321** - Southern New England Telephone Company (SNET) on behalf of Bell South Wireless Data, Inc. notice of intent to modify an existing SNET telecommunications facility located at North Eagleville Road, Storrs, Connecticut.

Dear Ms. Holmes:

At a public meeting held on May 25, 2001, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies, with the condition that the proposed whip antenna be installed without the proposed 20-foot mast.

The proposed modifications are to be implemented as specified here and in your notices dated January 4, 2001, and May 7, 2001. 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,

Mortimer A. Gelston
Chairman

MAG/RKE/laf

c: Honorable Elizabeth Patterson, Mayor, Town of Mansfield
Gregory Padick, Town Planner, Town of Mansfield
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae
Peter W. van Wilgen, SNET Mobility, LLC

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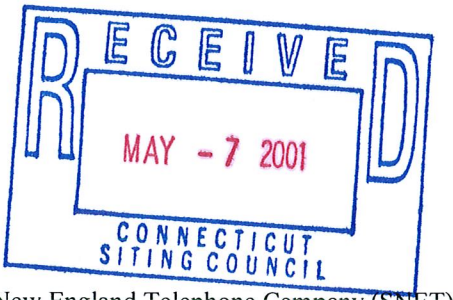
SBC
SNET

310 Orange Street
Floor 6
New Haven, CT 06510

May 7, 2001



Mr. Joel M. Rinebold
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: **EM-SNET-078-010321** – Southern New England Telephone Company (SNET) on Behalf of Bell South Wireless Data, Inc. notice of intent to modify an existing SNET Telecommunications facility located at North Eagleville Road, Storrs, Connecticut.

Dear Mr. Rinebold,

In response to your letter dated May 1, 2000, I have provided below a list of responses to the questions addressed in the above-mentioned letter. The responses are numbered according to the questions posed.

1. The analysis done by the RF engineer concludes that 80-90' would be sufficient to provide the required coverage. However, that is the top level of the tower, which is occupied by cell antennas. Bell South Wireless Data is at times adversely affected by proximity to cell and paging antennas. Therefore, Bell South Wireless Data's standard practice is to get at least 15' vertical separation between their antenna and any cell or paging antennas. The proposed mast is a simple pipe that would raise the Bell South Wireless Data antenna just enough to get this 15' separation.

2. A three-inch diameter galvanized iron pipe, extending 15' above the top of the tower, would be sufficient to provide the required antenna-antenna isolation.

3. There is currently at least one other item projecting from the top of this tower, which is several feet long, namely, the mast holding the aircraft beacon. The additional extension would be tiny in comparison to the main structure; it would be visually unobtrusive, as the mast would be gray galvanized and the antenna is in gray-blue color so as to "disappear" against the sky.

4. The SNET 80-foot tower was originally built to hold large microwave horns/dishes, which were quite large, heavy, and presented a large windload. The tower has since been "unloaded" of these dishes; the equipment currently on it is tiny and light, by comparison. SNET can provide an engineer's letter from Bayar Engineering which will confirm this.

5. The Site Acquisition staff from RCC Consultants did in fact contact UCONN about co-locating on their tower and were rebuffed (this was a year or so previous). RCC has had a lot of experience working with Sprint Sites USA and have found the process to have a lease executed lengthy. Also, the additional height was not necessary to provide the required coverage. This is consistent with RCC's responsibility to Bell South Wireless Data to acquire sites that are buildable in a reasonable time frame as opposed to sites which may be problematic to implement.

6. Both Bell South Wireless Data and RCC have dealt with Sprint USA on many of their other sites and choose another site due to past experiences.

Should you have any further questions, please feel free to contact me at (203)771-5013.

Sincerely,

Dawn Holmes

Dawn Holmes
Manager-Real Estate Administration

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

May 1, 2001

Dawn E. Holmes
Southern New England Telephone Co.
310 Orange Street, 6th Floor 6B6
New Haven, CT 06510

Re: **EM-SNET-078-010321** - Southern New England Telephone Company (SNET) on behalf of Bell South Wireless Data, Inc. notice of intent to modify an existing SNET telecommunications facility located at North Eagleville Road, Storrs, Connecticut.

Dear Ms. Holmes:

At a public meeting of the Connecticut Siting Council (Council) on April 26, 2001, the Council tabled action on this item until additional information is made available for the record. The Council requests your responses to the enclosed questions no later than May 8, 2001. To help expedite the Council's review, please file individual responses as soon as they are available.

Please forward an original and 20 copies to this office. In accordance with the State Solid Waste Management Plan, the Council is requesting that all filings be submitted on recyclable paper, primarily regular weight white office paper.. Please avoid using heavy stock paper, colored paper, and metal or plastic binders and separators. A list of parties and intervenors is enclosed. Fewer copies of bulk material may be provided as appropriate.

Yours very truly,

Joel M. Rinebold
Executive Director

JMR/grg

Enclosure

c: Council Members
Honorable Elizabeth Patterson, Mayor, Town of Mansfield
Gregory Padick, Town Planner, Town of Mansfield
Paul M. Shapiro, Assistant Attorney General, UCONN
Robert P. Vietzke, Manager of Video Communications, UCONN
John Murphy, General Manager, WHUS Radio
Peter W. van Wilgen, Cingular Wireless

Bell South Wireless Data
Interrogatories
April 30, 2001

1. What is the minimum height that Bell South Wireless Data could place their proposed antenna on the existing 80-foot SNET tower to achieve their coverage objective?

2. What are the dimensions of the proposed mast that would support the proposed whip antenna on the 80-foot SNET tower?

3. Explain why the proposed mast should not be considered a modification of an existing facility tower that would increase the tower height.

4. Provide documentation that the existing 80-foot SNET tower is structurally capable of supporting the proposed mast and whip antenna.

5. Could Bell South Wireless Data place their proposed whip antenna on either the existing 327-foot WHUS tower or the 250-foot Sprint tower?

6. Has Bell South Wireless Data contacted the representatives of Sprint Sites USA or the University of Connecticut regarding the placement of their whip antenna on either of the two existing structures?

Southern New England Telephone Co.
310 Orange St. 6th. Floor 6B6
New Haven, CT. 06510
Dawn E. Holmes
Manager Real Estate Administration
Tel 203-771-5013

January 4, 2001

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
136 Main Street, Suite 401
New Britain, CT 06051

Dear Chairman Gelston,

Enclosed is a Notice of Intent to Modify an Exempt Tower and Associated Equipment for facilities owned by the Southern New England Telephone Company (SNET) at North Eagleville Road in Storrs, Connecticut.

The proposed modification can be generally described as the addition of one (1) transmit antenna and associated base station equipment for Bell South Wireless Data Inc. The proposed antenna will be mounted at the top of a twenty foot mast mounted on top of the existing free standing tower structure. No changes will be made to the fence surrounding the installation, or any of the existing structures on the site. The base station equipment will be housed inside the existing communications equipment shelter located at the base of the tower.

The attached pages detail the required information for this location. As shown in the attachments, the proposed addition meets all the necessary criteria established in the Regulations of Connecticut State Agencies Section 16-50j-72 (b) (2), and is an exempt facility pursuant to Section 16-50j-73.

Please record me as Site Manager for SNET in this matter and in all correspondence from the Council.

Thank you in advance for your cooperation.

Sincerely,

Dawn Holmes

North Eagleville Road, 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, the Southern New England Telephone Company (SNET) hereby notifies the Connecticut Siting Council that it intends to modify an existing communications facility by permitting the installation of a Radio Paging Antenna System as specified below to an existing communications tower. This antennas will be owned, operated and maintained by Bell South Wireless Data Inc. Associated communications hardware will be located in the SNET existing communications equipment shelter. The tower is located at North Eagleville Road, Storrs, Connecticut.

Background

The proposed modifications are at the site of a self supporting 80-foot lattice communications tower on North Eaglesville Road, Storrs, CT. The top of the tower is 80 feet above grade. Both the structure and the tower are owned and operated by SNET. The tower was formally used as a microwave tower for SNET telecommunications network, and is currently used as indicated on the power density chart, below.

Discussion

The highest point at the tip of the transmitting antenna will measure 108 feet above grade. Lowest point of this antenna will be at 100 feet above grade. The power density this antenna contributes at this site is tabulated below. The purpose of this modification is to provide two-way Radio Pocket Paging Service to the public. The proposed transmitting antenna will be Manufactured by Decibel Products Company, Model DB589Y. The operating frequencies will be in the 900 MHz band.

Below is a power density chart which represents calculated existing and proposed non ionizing radiation levels. The levels shown indicate the total power density in milliwatts per square centimeter. These levels have been calculated at both the tower base, and at the site boundary.

Service	Power Density @ Tower Base mW/cm^2	Top of Antenna Height (Feet AGL)	CT/ANSI Standard mW/cm^2	% of Standard @Site Boundary
SNET Mobility	0.4179	87	0.6	66.1
TMRS	0.0126	92	0.3	4.13
Voicestream (Omnipoint)	0.0461	66.5	1	4.48
Bell South Wireless Data	**0.005512**	**108**	**0.6**	**0.919**
Totals	**0.482112**	—	—	**75.629**

The current Connecticut (and ANSI/IEEE) power density level standards, for non-ionizing radiation, are shown above. A ground reflection coefficient of 1.6 is used. The levels identified in this case are below the standards. These calculations conform to the procedures described by FCC OST Bulletin No. 65.

Conclusion

The proposed additions do not constitute a "modification" of an existing facility as defined in the Connecticut General Statutes Section 16-50i(d). There will be no change to the tower height or extension of the boundaries of the site. The tower is structurally sufficient to support the proposed antennas. There will be no increase in noise levels at the site's boundary by six (6) decibels or more and the total radio frequency electromagnetic radiation is not at or above the standard set forth in Section 22(a)-162 of the Connecticut General Statutes. This addition will not have a substantially adverse environment effect.

For these reasons, SNET requests that the Council acknowledge that this Notice of Modification meets the Council's exemption criteria

POWER DENSITY CALCULATION MODEL

User-defined inputs

Operator
BSWD

Antenna Gain	
dBd	dBi
9.0	0

Transmitter Po	
30	Watts

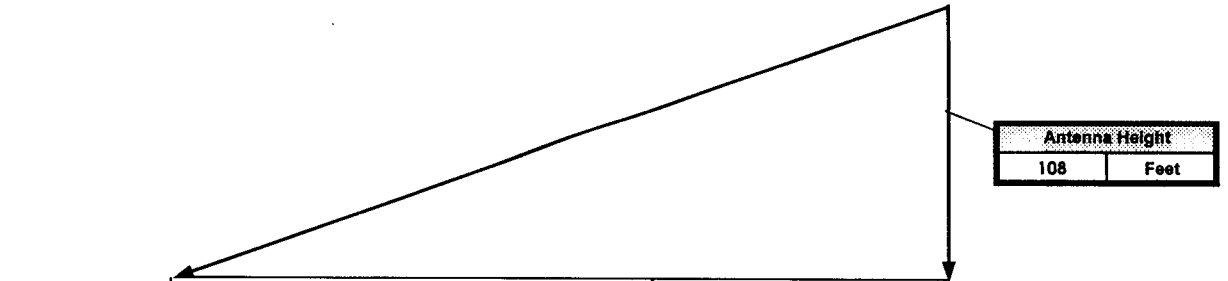
Ground Reflec. Coeff	
1.6	

System Losses	
1.25	dB

Frequency	
900.000	MHz

Antenna Height	
108.0	Feet

Radial Dist., Antenna Base to Site Boundary	
20.0	Feet



Antenna Height	
108	Feet

Site Boundary

Power Density (mW/cm2)		
Predicted	Max allow	% of std
0.005329	0.6000	0.888

E-Field (V/m)		
Predicted	Max allow	% of std
4.482143	0.0000	#DIV/0!

H-Field (A/m)		
Predicted	Max allow	% of std
0.011889	0.0000	#DIV/0!

Radial Dist., Antenna Base to Site Boundary	
20	Feet

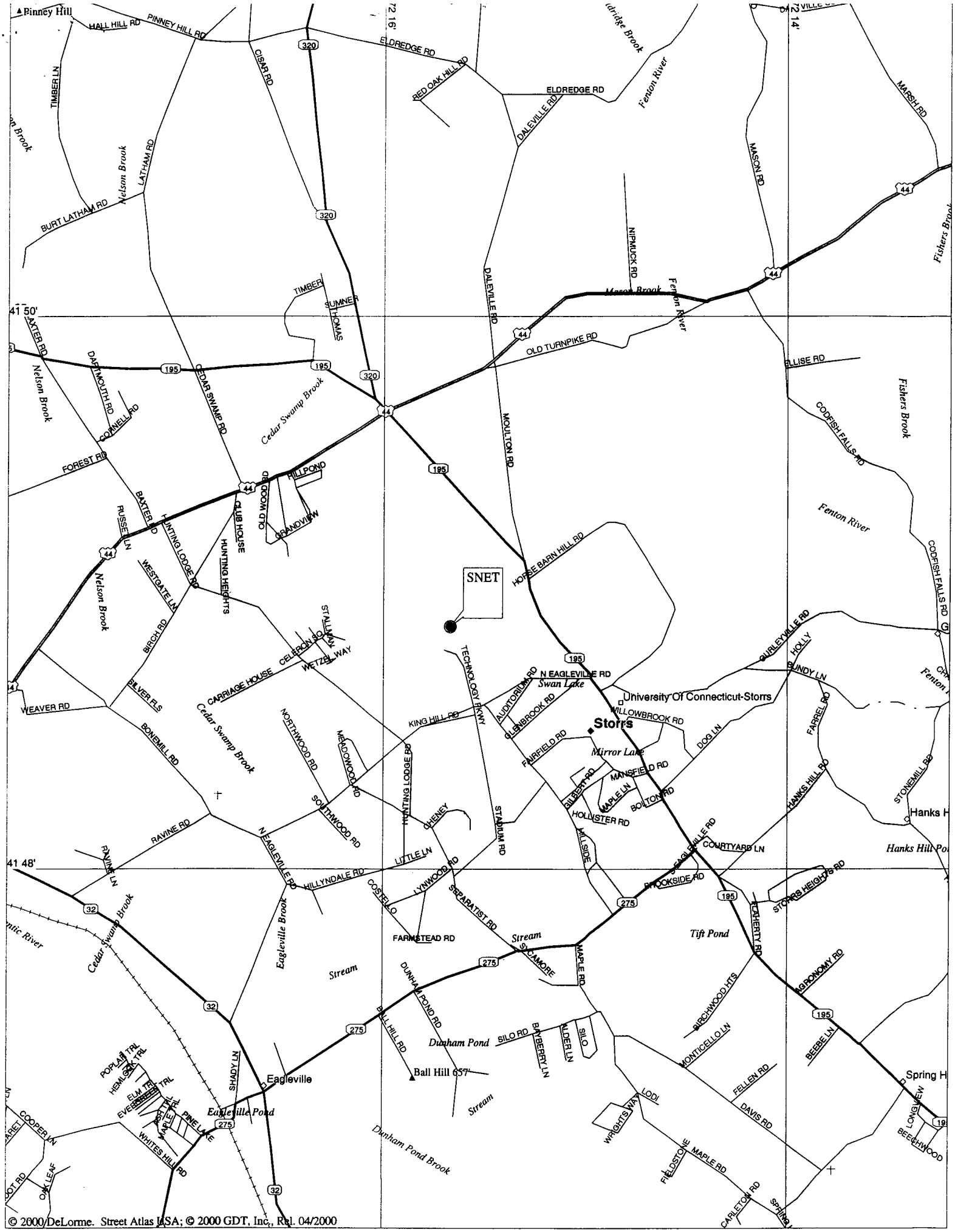
Antenna Base

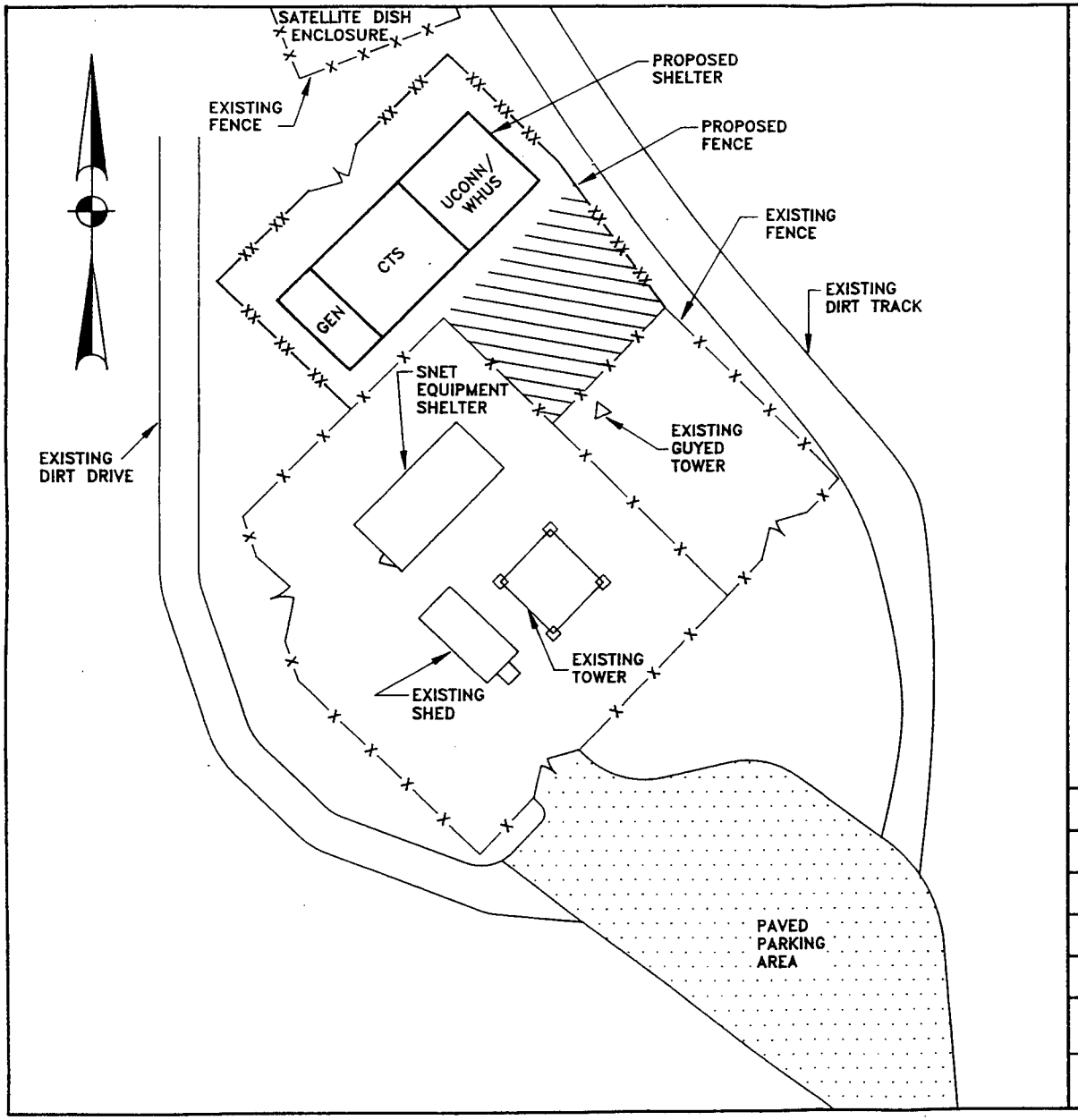
Power Density (mW/cm2)		
Predicted	Max allow	% of std
0.005512	0.6000	0.919

E-Field (V/m)		
Predicted	Max allow	% of std
4.55835	0.0000	#DIV/0!

H-Field (A/m)		
Predicted	Max allow	% of std
0.01209	0.0000	#DIV/0!


Mansfield
Trailer Park
FOREST STREET
Nelson
BM
CLUB HOUSE
PUMPING
WEAVER
State Hospital
Mansfield Depot
Sewage Disposal
Gurley Cem
NORTH EAGLEVILLE RD
Storrs
UNIVERSITY OF CONNECTICUT
M A N S F I E L D
Eagleville Lake
Dunham Pond
Bell Hill
SOUTH EAGLEVILLE
Eagleville
CENTRAL
COOPER LANE
ROOT ROAD
VERMONT
RIVER
DUNHAM TOWN
4634
4633
4631
4630
4629
47'30"
SPRING HILL 2.1 MI. (SPRING HILL)
WILLIMANTIC 8.2 MI. 6567 I SW





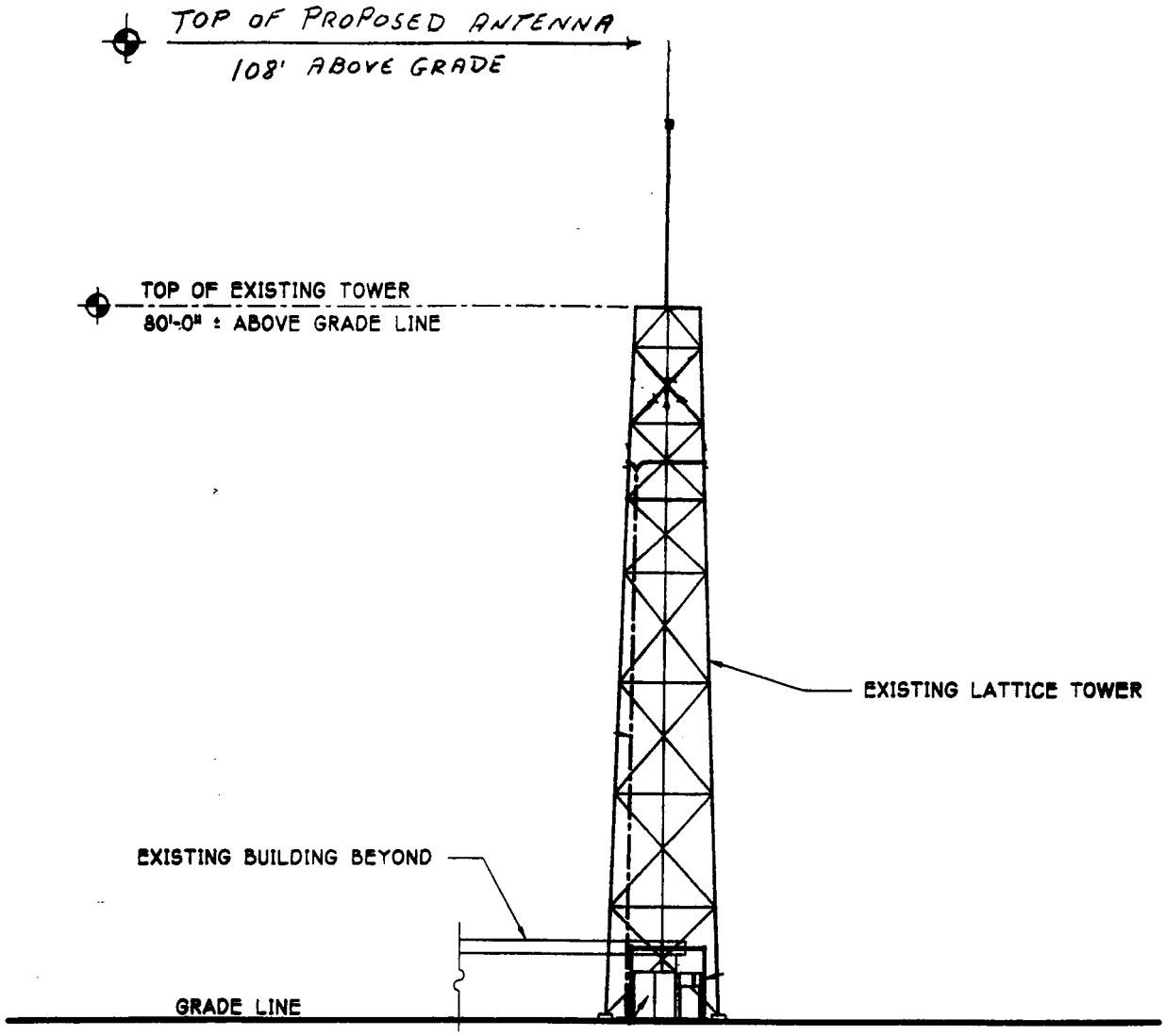
ATTACHMENT A

NOTES:

1. ARROW INDICATES TRUE NORTH.
2. ALL DIMENSIONS ARE IN FEET.

AREA ASSUMED FOR NEW GUYED TOWER

REV.	DESCRIPTION	DATE	APP.
DRAWN WLF	1/31/91	AEROFLEX SYSTEMS CORPORATION An ARX Company	
DESIGNED EHW	2/1/91	SITE STORRS	
CHECKED JCM	2/1/91	TITLE SITE PLAN	
PROJECT APPROVED EHW	2/1/91		
APPROVED FOR		SIZE B / PROJECT CTS / DRAWING NUMBER 066-200 / REV. 0	
APPROVED FOR		SCALE 0 10 FEET 30 40	SHEET 1 of 1


TOP OF PROPOSED ANTENNA
108' ABOVE GRADE
TOP OF EXISTING TOWER
80'-0" ± ABOVE GRADE LINE
EXISTING LATTICE TOWER
EXISTING BUILDING BEYOND
GRADE LINE

Antennas, Base Station

Decibel Products DB589	Decibel Products DB589T3–Y
	
Fiberglass	Fiberglass
Collinear, fiberglass. Omnidirectional. 9 dB gain. Extremely broad frequency response. Horizon blue radome. Drain plugs at both ends.	Collinear, fiberglass. Omnidirectional. 9 dB gain. Extremely broad frequency response. Horizon blue radome. Drain plugs at both ends. 3 deg. downtilt.
806–960 70	806–960 70
9 11.15	9 11.15
9 Deg. None	9 Deg. 3 deg.
250 Watts 1.5:1	400 Watts 1.5:1
Vertical N/A N/A N/A DC Ground	Vertical N/A N/A N/A DC Ground
8.5" x 1.5" 11.5	8.5" x 1.5" 11.5
100 0.638 28.4 N/A	100 0.638 28.4 N/A
N female None Bottom	N female None Bottom
Dual Purpose Mount For up to 3" pipe	Dual Purpose Mount For up to 3" pipe
1 Year	1 Year

Back to Mobitex Network - BRU3

Technical Data - BRU3 (900MHz)

Physical

Dimensions:	
Height (including handle)	13.4 inch/340 mm
Width	16.9 inch/430 mm
Depth	7.1 inch/180 mm
Weight	18 kg

Power

Power supply	110/230 VAC
Power consumption:	Maximum
Not using the heating function	100 W
Fully using the heating function	700 W
Battery operation (no heating function)	BRU3901 30 minutes 0-55°C

Radio specifications

Frequency ranges RX/TX	896-902/935-941 Mhz
Channel spacing	12.5 kHz
Modulation bit rate	8 kbps
Receiver sensitivity	-117 dBm (at 1% BER)
Transmitter output power	Max 3 W (Adjustable in steps of 3 dB)

Radio Data Transmission

Power saving mode	Enables battery power saving mode of mobiles and portables
Roaming	Enables mobiles to automatically roam to the best base station
Traffic mode	Two-frequency semiduplex
Media access control	Modified non-persistent CSMA
Mode of operaion	Continous or frame

Capacity

Number of channels	1 system channel (full traffic capacity: 13,000 pph)
Maximum number of users	1,500

Network Communication

Pysical interfaces	V.32/V.32 bis, RS 422, RS 232
Link carrier protocol	X.25

Alarms

Alarm function	High and low temperature

BELLSOUTH®

BellSouth Wireless Data

27 June, 1997

30 Watt Power Amplifier Specification

Performance Specifications:

The Device Under Test (DUT) must meet or exceed the following minimum performance specifications.

Parameter:	Specification:
Frequency:	935-940MHz
Gain:	10dB Min at 30 Watts output(44dBm)
Gain Vs. Freq.:	+/- .25dB
Second Harmonic:	<60 dBc
Operation Mode:	Single Channel
Modulation Format:	GMSK
Noise Power Output:	-90dBm
Output Power:	30 Watts Minimum
VSWR S11,S22:	1.5:1 Max.
Voltage:	120VAC 47-63 Hz
Temperature	
Operating:	0° - 60° C
Storage:	-40° - 85° C
Auxiliary output:	+12VDC +/-.25V, 500 mA 30" AWG22 Stranded Pigtail with compatible connector to Radio Shack PN#274-222. connector on pigtail to be jack with socket contacts +12VDC on the triangular end and return on the flat side. + 12 Volt wire to be red and return to be black.
Connectors:	
RF:	Type N Female mounted at the rear of the chassis.
AC:	IEC 320 at the rear of the chassis. With 2 meter line cord.
Efficiency:	40% at 25° C
Dimensions:	19" W EIA Rack Mount 7"H X 12"D Max.
Burn In:	50° C, 48 hr., at full RF power.
Temperature cycling:	Full RF Power, Start 25° C Ramp to 60° C, soak for one hour, Ramp to 0° C, soak for one hour, Return to 25° C.