



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

10 Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
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FACSIMILE TRANSMISSION SHEET

August 21, 1997

TO: David S. Malko, P.E. Manager
Engineering & Regulatory Services
Bell Atlantic NYNEX Mobile
20 Alexander Drive, P.O. Box 5029
Wallingford, CT 06492

FROM: Joel M. Rinebold, Executive Director
Connecticut Siting Council

RE: Antenna Detuning

The attached information regarding antenna radiation patterns has recently been brought to my attention. Although this is a matter that seems to be better handled by the FCC, it may be a matter that can be rectified by simple detuning to avoid intervention by the FCC.

I've known Charles Fitch for several years and find him reasonable and easy to work with. You can call him at (860) 673-7260.

Let me know how you make out. Good luck.

JMR:mmb
Attachment

RECEIVED

AUG 18 1997

To : Joel M. Rinebold,
Executive Director
Connecticut Siting Council

From : Charles S. Fitch, P.E.
Broadcast Engineering Consultant *Buc*

CONNECTICUT
SITING COUNCIL

Date : 15 Aug 97

Re : Bell Atlantic - NYNEX Mobile (BANM)
Windsor cellular tower

Mr. Rinebold,

Thank you very much for the fax transmission of the application that will be considered as item 2. on the agenda of the Council's meeting for 20 August 97.

There was/is some confusion on my part in that I assumed that all of the BANM sites listed were to be considered.

It appears that all these are on one certificate but that only Willington will be considered for changes to allow NEXTEL to colocate.

My inquiry was from my position as consultant engineer to WKND-AM licensed to Windsor, CT. The station technical personnel and I have been involved in a major rebuilding project of that station's very directional transmitter facility. Essentially we are completely rebuilding their highly deteriorated, nearly 40 year old facility as new.

At present we are 90% through the construction portion of this project and have entered the measurement section. Although we are in a short hiatus due to weather and vacations, we are hoping to wrap this up in the near future.

This station is all new to me and as we started taking Field Intensity Measurements (FIMs) to determine that the antenna pattern was in compliance, we discovered (sort of like a Jacques Cousteau movie) BANM's tower on Pigeon Road.

This tower presents two significant problems to the station

one, it appears to be almost a quarter wave high at 1480 KHz and

two, it sits on the near shoulder of the station's critical northern signal null which ostensibly protects the 1490 station in West Springfield/Westfield.

Both of the above circumstances conspire to have the worst influence on the WKND signal in this area and make adjustment of this mandatory signal null difficult and unstable.

This tower was erected under the management of the original non-wireline cellular operator so it is not really BANM's fault that it was erected in such a critical location. However since it is there now, it should be detuned at 1480 KHz to allow WKND-AM to operate properly.

The station's chief engineer cannot find any record of the previous tower owner contacting the station before the original construction to effect compliance with FCC policy codified in 47CFR22.371.

Some background notes below should acquaint you with this regulation if you are not aware of it.

My general thought was that if BANM wanted to make changes on this structure this would be a good time to detune it at 1480 and bring it into compliance.

The asterisk on the map that follows locates the BANM tower near enough.

The Sprint tower indicated is their temporary structure nearby that they have already agreed to detune shortly after erection. If any permanent structure goes in to replace this, that structure will also be detuned.

In a larger context, since all these BANM towers seem to be on one certificate, possibly the Siting Council might insist on all of them being in compliance before changes on any of the individual towers would be entertained.

It certainly would be helpful to this tiny flea powered station (where every watt counts) that has persevered as the only continuous minority programmed station in the Hartford area for nearly 20 years.

As always, if there are questions or if you need more supporting information, please give me a call.

Thank you very much for your help and assistance in this matter.

Bert
Brewer

Background notes taken from various correspondence

FCC policy codified in 47CFR22.371 states that common carriers proposing to erect antenna support structures within 0.6 mi (1 km) of a non-directional AM station or 2 miles (3 km) of a directional AM station must perform measurements that adequately demonstrate that construction of the new tower will not adversely affect the radiation pattern of the affected AM station(s). The proponent is also responsible for installing detuning apparatus and maintenance thereof if necessary.

There is a case of record (KCRC v. B&W Trucking, 15 FCC 2d 709 [1968]) that was the precedent for the "two mile rule". This case essentially obligates ALL FCC regulants to make pre-construction and post-construction partial proofs (in accordance with 73.154) and detune the communication tower if necessary. This case is interesting reading, especially the last part where the Commission indicated they would "initiate appropriate proceedings looking toward examination of your qualifications to be a licensee in the Special Industrial Radio Service". This was written in 1968 when the Commission was probably at the peak of its technical and administrative leadership in the industry. The Commission also issued a policy statement in 1989 describing the procedure.

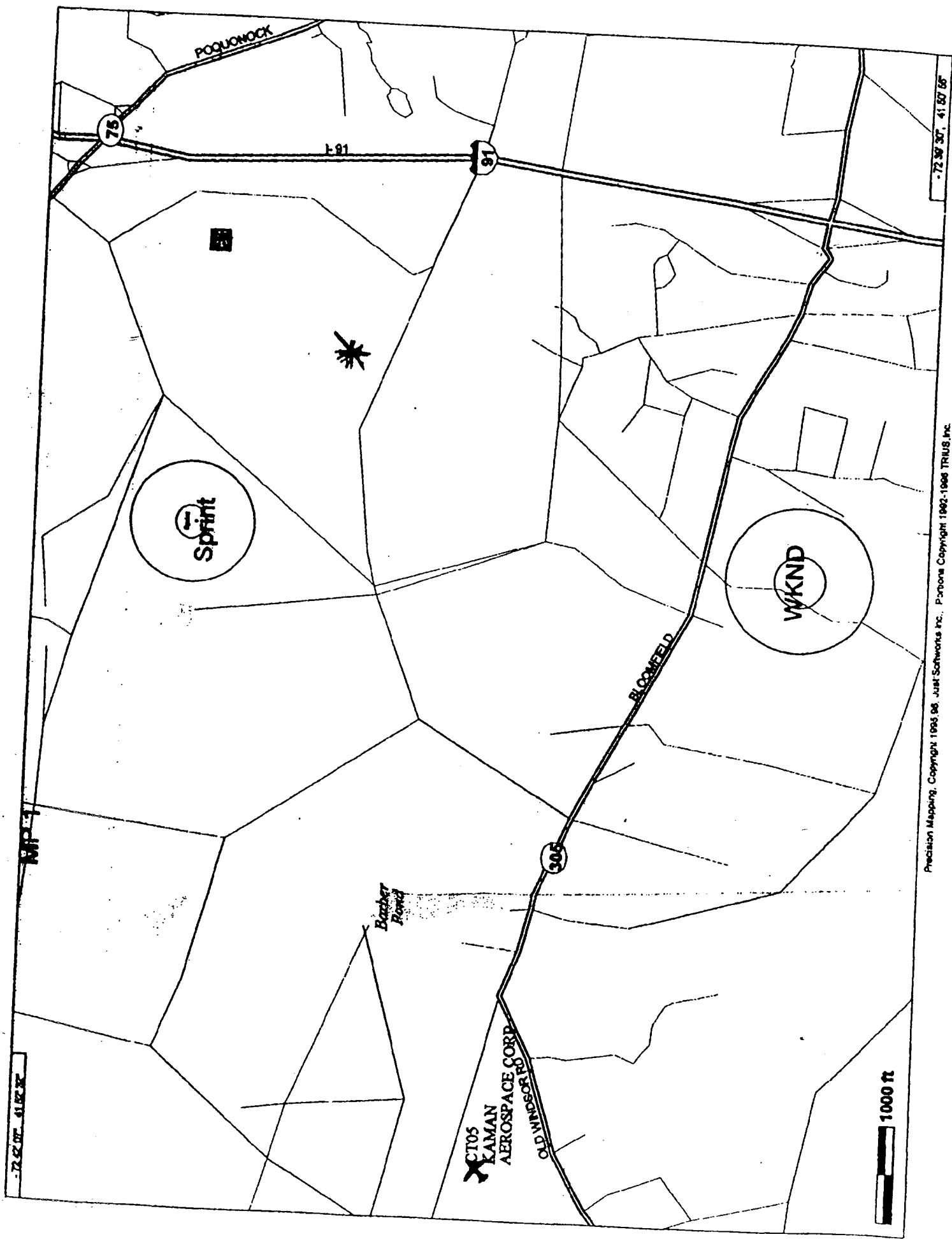
Section 22.371 obligates common carriers to notify affected AM stations of the proposed construction, and make pre-construction, detune the communication structure if necessary, and make post-construction measurements which should demonstrate no adverse change has occurred to the radiation pattern. The standard (as cited in the 1989 policy statement issued by the FCC) is Section 73.154. In the real world, a sizable number of common carriers are cutting corners on the measurements in several ways...informing AM stations that theoretical computations show no adverse effect, not using proof points as measurement points, etc.

I advise my AM clients to write directly to Bill Ball at the FCC (who is aware of the problem and probably is keeping a list) at (202) 418-2660 if they believe measurements done by a common carrier or their agent are not in strict accordance with 73.154. I advise my AM clients to always have the measurements done and NEVER accept any theoretical computations in lieu of measurements... if a station signs its rights away based on a computation and measurements later show trouble, recovery may be difficult. 22.371 specifies "measurements", not "theoretical computations". The AM station (especially directionals) is held to 73.154 so in all fairness this should be the standard for all commercial communication towers within the specified distance.

Incidentally, the fine levied on a common carrier for failure to timely notify an effected AM station in advance of tower construction starts at \$4,000.00. (The old fee schedule-the latest is mostly higher) It's my impression the FCC is going to do something about the problem sooner or later by reworking 22.371 into Part 1 along the line of the earlier 1989 policy statement. Meanwhile, it's also my impression the FCC may obligate certain common carriers to pay for readjustment and proof of certain directional broadcast antennas adversely affected by common carrier construction and inadequately detuned and/or measured.

One should also look up the WFGW, WIDU, or other cases that have been referred to the Commission for handling.

For the most part, the responsible common carriers want to do a good job and be good neighbors. They don't want complaints piling up at the FCC. A lot of the PCS providers are unaware of the FCC's AM policy and this is a problem area. Occasionally, due to personnel turnover and other transient situations at cellular and other telecommunication companies, the matter of AM station protection is often simply overlooked.



-72 52 00' 41.82 32"

-72 30' 30", 41 50' 56"

Precision Mapping, Copyright 1993, 98, Just Software Inc., Phoenix Copyright 1992-1998 TRIUS, Inc.

1000 ft

Bell Atlantic NYNEX Mobile
20 Alexander Drive
P.O. Box 5029
Wallingford, CT 06492
Telephone: 203-269-8858

Jennifer Young Gaudet
Manager - Regulatory

February 25, 1997

RECEIVED

FEB 25 1997

CONNECTICUT
SITING COUNCIL

HAND DELIVERED

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

Re: Bell Atlantic NYNEX Mobile - GPS Antennas - Windsor, Vernon, Willington, Rocky Hill, Branford, Milford, Darien, Fairfield, Guilford and North Haven Cell Sites

Dear Mr. Rinebold:

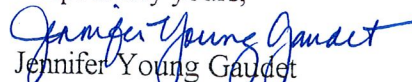
Bell Atlantic NYNEX Mobile ("BANM" or the "Company") plans to mount a small Global Positioning Satellite System ("GPS") receive-only antenna on its towers at the existing BANM facilities referenced above. Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification to each facility pursuant to R.C.S.A. § 16-50j-72(b). In compliance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the chief elected official of each town in which a referenced facility is located, as shown on the attached Appendix A.

The addition of BANM's GPS antenna to each tower site does not constitute a modification as defined in C.G.S. § 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. The addition of the GPS antenna will have no effect on any of the sites.

The planned change to each facility falls squarely within those activities provided for in R.C.S.A. § 16-50j-72(b). The height of the tower will be unaffected. In the case of monopoles, the GPS antenna will be placed on the top platform, where BANM's other antennas are located, and will not extend above the existing antennas. In the case of lattice towers, the GPS antenna will be placed on an approximately 2' sidearm at the 60' level of the tower. Attached as Appendix B is relevant tower and site data for each of the sites. The addition of the GPS antenna will have no effect on the site boundary or noise levels at any of the sites. Nor will there be any effect on the total radio frequency electromagnetic radiation power density at any of the sites, because the GPS antennas are receive-only antennas.

BANM therefore respectfully requests the Council's acknowledgment under R.C.S.A. § 16-50j-72(b) of the addition of the GPS antennas at the referenced facilities.

Respectfully yours,


Jennifer Young Gaudet
Manager - Regulatory

Enclosures

Chief Elected Officials

Honorable Francis J. Brady, Mayor, Town of Windsor
Honorable Tony Muro, Mayor, Town of Vernon
Honorable John Patton, First Selectman, Town of Willington
Honorable Donald W. Unwin, Mayor, Town of Rocky Hill
Honorable Dominic A. Buonocore, First Selectman, Town of Branford
Honorable Frederick L. Lisman, Mayor, Town of Milford
Honorable Henry M. Sanders, First Selectman, Town of Darien
Honorable Paul A. Audley, First Selectman, Town of Fairfield
Honorable Edward J. Lynch, First Selectman, Town of Guilford
Honorable Anthony P. Rescigno, First Selectman, Town of North Haven

Site	Address	Type of Tower	Tower Height	Docket
Windsor	482 Pigeon Hill Road	lattice	160'	58
Vernon	South Street	lattice	130'	58
Wilmington	Cosgrove Road	lattice	140'	58
Rocky Hill	France Street	monopole	140'	58
Branford	1801 North Main Street	monopole	110'	122
Milford	423 Oronoque Road	monopole	100'	56
Darien	Ledge Road	monopole	100'	155
Fairfield	281 Woodhouse Road	monopole	160'	86
Guilford	131 Manor Road	monopole	150'	56
North Haven	117 Washington Avenue	monopole	120'	117