# cingular wireless

FACSIMILE TRANSMITTAL SHEET				
TO: DAVE	MARTIN FROM STEVE LEVINE			
COMPANY:	DATE: 3/14/0 2			
FAX NUMBER: 827	-2950 TOTAL NO. OF PAGES INCLUDING COVER:			
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:			
E. HAM	YOUR REFERENCE NUMBER: PTON FOUNDATION REPORT FAILS			
□ URGENT □ FOR	REVIEW     PLEASE COMMENT     PLEASE REPLY       PLEASE RECYCLE			
NOTES/COMMENTS:				



November 11, 2002

Mr. Hubert Nugent Bechtel Telecommunications 175 Capitol Boulevard, Suite 100 Rocky Hill, Connecticut 06067

Reference:

**Existing Telecommunications Facility** 

Cingular Site No.: 1067 65 Midwood Farm Road East Hampton, Connecticut 2292.30 / 36911720.00012

Dear Mr. Nugent:

URS Corporation AES (URS) was retained by Bechtel Corporation to conduct foundation investigations for the purpose of conducting a foundation stability analysis at an existing tower site in East Hampton, Connecticut. This letter is a supplement to the detailed structural analysis and evaluation prepared by URS, revision date October 31, 2002. The original foundation design and as-built document were not available. Exploratory site investigations were performed on November 8, 2002 to reveal the type and size of foundation. With the ascertained data, URS performed a foundation stability analysis for overturning and tower uplift. The result indicated that the tower foundation does not meet the Connecticut State Building Code for the uplift safety factor requirements for the proposed Cingular antenna arrangement. See the attached analysis for more details.

It is our determination that the existing foundation does not have sufficient structural capacity to support the Cingular Wireless installation specified in the structural analysis and evaluation report prepared by URS Corporation Job No.: 36911720.00012 Revision Date October 31, 2002. The evaluation was based on requirements of the TIA/EIA and the Connecticut State Building Code dated 1999 and the latest supplement and amendments.

URS recommends that the existing foundation be reinforced. The reinforcement would consist of casting concrete over and around the existing foundation to provide sufficient ballast (counter-weight) to resist uplift with the safety factor of 2.0 as required per code. The design of reinforcement of the foundation is not part of this letter/analysis and will be performed upon your request and authorization.

If you should have any questions, please call.

Sincerely,

**URS Corporation AES** 

Mohsen Sahirad, P.E. Senior Structural Engineer

Senior Structural Enginee

Enclosure

MS/mks

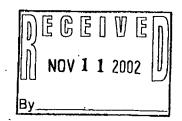
cc: Kirit Parikh - Bechtel

I. Artaiz, AIA - URS D. Roberts, AIA - URS

A. Abadjian, PM - URS

CF/Book

URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Tel: 860.529.8882 Fax: 860.529.3991



## Service Servic

#### STATE OF CONNECTICUT

#### CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401 New Britain, Connecticut 06051-4225 Phone: 827-7682

September 1, 1994

Peter J. Tyrrell, Esq. Senior Attorney Springwich Cellular Limited Partnership 227 Church Street New Haven, CT 06510

RE: Springwich Cellular Limited Partnership request for an order to approve tower sharing at an existing telecommunications tower located at 65 Midwood Farm Road in East Hampton, Connecticut.

#### Dear Attorney Tyrrell:

At a meeting held August 30, 1994, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, the Council issues this order approving the shared use of this tower under Public Act 94-242.

In compliance with Public Act 94-242, the Council has ordered the shared use of this existing tower to avoid the unnecessary proliferation of tower structures.

The proposed shared use is to be implemented as specified in your letters dated July 5, 1994 and August 15, 1994.

Please notify the Council when all work is complete.

A copy of the staff report on this request is enclosed for your information.

Very truly yours,

Mitue A Holdinger

Chairman

MAG/RKE/ss

Enclosure

decision.doc pg 13



#### STATE OF CONNECTICUT

#### CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401 New Britain, Connecticut 06051-4225 Phone: 827-7682

Springwich Cellular Limited Partnership
Request for Shared Use
East Hampton, Connecticut
Staff Report
August 30, 1994

On July 5, 1994, Springwich Cellular Limited Partnership (Springwich) submitted to the Connecticut Siting Council (Council) a notice of intent to modify an existing tower pursuant to the Regulations of Connecticut State Agencies section 16-50j-72(c) and a request for the Council to order shared use of an existing tower pursuant to section 2 of Public Act 93-268, and sections 6 and 7 of Public Act 94-242. Public Act 94-242 states "An owner of a facility which agrees to shared use of the facility pursuant to this section may request in writing that the Council approve the proposed shared use of the facility. 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."

On August 15, 1994, at the request of Council staff, Springwich submitted additional information on the assumptions underlying the power density calculations as well as additional information on the technical, legal, environmental, economic feasibility, and public safety issues involving the shared use of this tower.

The proposed site is located at 65 Midwood Farm Road in East Hampton, Connecticut. An existing 120-foot lattice tower constructed in 1991 holds three ten-foot whip antennas at the top of the tower and six additional whip antennas on the side which are used for a radio communications sales, installation and service business, as well as by six other businesses.

Springwich proposes to add three six-foot tall whip omnidirectional antennas at approximately the 105-foot level of this tower to supplement cellular coverage along Route 66 in East Hampton. A 12-foot by 26-foot prefab equipment building would be constructed adjacent to the tower and an existing equipment building. The existing building, nearly full, does not have sufficient room for the additional Springwich equipment. Springwich has entered into an agreement with the owner of the tower for use of his land and tower space.

The addition of cellular antennas to this existing tower would not increase the tower's height, extend the boundaries of the site, increase noise levels at the site boundary by 6 decibels or more or increase the total radio frequency electromagnetic radiation power density to or above the State standard (3.3% of the State standard) pursuant to

August 30, 1994 Staff Report Page 2

Connecticut General Statutes section 22a-162. In addition, there is no expectation that this facility would cause local radio interference.

The Town of East Hampton has determined the facility meets the Town's land use requirements.

No water or sanitary facilities would be required, and no air pollutants emitted. Some noise would be emitted from the air conditioning units installed within the new equipment building.

Use of this tower would allow the installation of a cell site without construction of a new tower, thereby providing a direct cost savings to Springwich.

The provision of cellular service to this portion of East Hampton would improve public safety and serve the Town's residents during emergencies involving police, fire, and medical personnel.

Springwich contends that the addition of cellular antennas to the existing tower and construction of an equipment building will not increase the tower's height, extend the boundaries of the site, increase noise levels at the site's boundary by six decibels or more, and the total radio frequency electromagnetic radiation to or above the State standard pursuant to Connecticut General Statutes Section 22(a)-162. Springwich also contends that the sharing of this tower is technically, legally, environmentally, and economically feasible and meets public safety concerns. Therefore, Springwich requests that the Council approve the proposed shared use of the facility, and issue an order approving such shared use under Public Act 94-242.

RKE/ss staff.doc pgs 8-9

### ORIGINAL

SNET Mobility, Inc. 555 Long Wharf Drive 8th Floor New Haven, Connecticut 06511 Phone (203) 553-7601



**Barry F. Burke** Vice President-Operations

August 15, 1994

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



CONNECTICUT SITING COUNCIL

Dear Mr. Gelston:

At the request of Council's staff, attached is additional information on our recent Exempt Modification filings in East Hampton and Stratford.

This information includes detailed worksheets on how the power density calculations were derived, and additional discussion on the technical, legal, environmental, economic and public safety aspects of each location.

Very truly yours,

Bay F. Burke

#### EAST HAMPTON

All power density figures are calculated following the IEEE C95.1-1991 standard.

The following three assumptions are applied for a worst-case approximation where the specific make and model of the antenna are unknown, and thus the antenna transmission pattern (main beam and secondary lobes) cannot be determined:

- 1) All antennas are omni-directional in both the horizontal and vertical plane.
- 2) All transmitters are activated simultaneously at full power.
- 3) There is 100% ground reflection of the signal, which results in doubling the signal strength and increasing the power density by a factor of <u>four</u>.

When the specific antenna type and transmission pattern are known, as in the case with the cellular antennas to be used in East Hampton, SCLP uses a method of calculation which considers the type of antenna and the power that is emitted from the <u>nearest</u> lobe instead of the main horizontal beam. This results in a more realistic representation of the antennas radiating pattern and its orientation relative to a specific target location.

The formula for power density is:

 $s = EIRP/\pi R^2$ 

where: S = power density.

EIRP = equivalent (or effective) isotropic radiated

R = distance to the center of radiation (antenna).

The cellular power density calculation is based on fifty-six channels emitting 100 Watts ERP each.

Since power density is expressed in milliwatts per square centimeter, the following conversions must be made:

1 foot = 30.5 centimeters

1 Watt = 1,000 milliwatts (abbreviated as mW)

1 Watt ERP = 1.64 Watts EIRP (this is the gain of a half-wave dipole relative to an isotropic radiator)

Using the cellular omni-directional Austin 7.5 dB gain antenna, the gain of the lobe nearest to the target location is 10.5 dB down from the main horizontal lobe or main beam (see attached sketch). While the main horizontal lobe emits the full 100 Watts ERP, the nearest secondary lobe emits only 8.91 Watts ERP. 8.91 Watts equals 8910 milliwatts, and is used in the power density formula.

Based on the location and orientation of the cellular antenna (105 feet above the tower base), the nearest lobe is directed at a point 53 feet away from the base of the tower. This location is 120 feet away from the antenna, or 3657 centimeters (R).

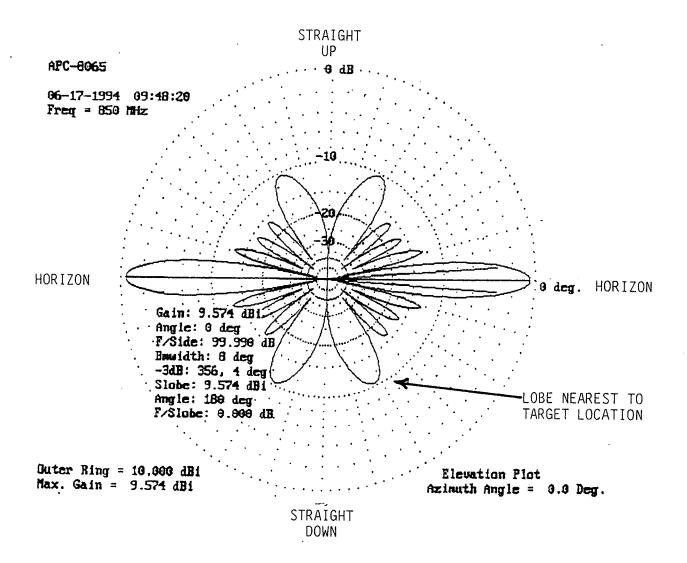
Substituting all these values into the power density formula, we get:

 $S = ((1.64)(56)(8910))/((7)(3657)^2) = 0.0194 \text{ mW/cm}^2$ , or 3.3 % of the ANSI and Connecticut Standard.

The power density at the nearest site boundary of the East Hampton site (approximately thirty feet from the tower) is actually lower as it is within the "null" between the main beam and secondary antenna lobe. Midwood Farm Road is approximately 140 feet from the base of the tower, and for the same reason, the power density would be considerably lower than above.

Because cellular power density in the accessible immediate vicinity is the highest where the nearest secondary lobe is directed (at 53 feet from the tower base), power densities for the other antennas on the tower have also been calculated at a distance of 53 feet from the tower base, using the three worst-case assumptions listed above. Those calculations yield the following:

Service	Power Density	Standard	Percent
Mobile	0.0310	0.200	15.50
Mobile	0.0575	0.310	18.55



#### EAST HAMPTON

Public Act 93-268 states in part that "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".

SCLP's use of the existing tower in East Hampton directly addresses and supports the General Assembly's and the Connecticut Siting Council's goal of using existing towers whenever possible. Upon SCLP's showing, as stated below, that the above criteria have been met, the Council, pursuant to Public Act 94-242, is permitted to find that shared use is feasible and issue an order approving such shared use.

SCLP addresses the specific areas of concern as follows:

Fair Consideration - As shown on Exhibit B of our Exempt Modification filing, SCLP has entered into an agreement with Howard McAuliffe, Inc. for the use of its land and tower space. The parties have reached a mutually acceptable agreement through negotiations of a fair rental and lease term. Both parties are in agreement with this arrangement.

Technical - SCLP's engineers have reviewed and analyzed the East Hampton site and determined that there is minimal probability for interference from or to other existing radio transmissions from this location. Under FCC regulations, if the last party attaching to a tower causes interference to others where none had existed before, it is the responsibility of that party to eliminate said interference. SCLP recognizes and supports such regulation, and agrees to comply with the FCC rules in this respect. SCLP has never been advised that it has caused interference to any AM or FM radio or television reception from any of its sites.

Legal - The Town of East Hampton has approved this location as appropriate for use as a telecommunications site. It took this step after determining that the facility met the Town's land use requirements. SCLP has executed a lease with the owner of this site. This lease permits, upon the Council's approval, use of the existing tower and real

estate as a cellular site location. Pursuant to Public Act 94-242, Section 6(c), the Council has been authorized by the Connecticut State Legislature to issue an order approving the shared use of an existing tower. This new authority compliments the Council's existing power to issue orders approving the construction of new towers if similar criteria are met. This is because the Council may rely on the Town as having sited the facility originally. Similarly, the Council's new authority under Public Act 94-242, Section 7(a) is co-extensive with the Council's existing power pursuant to Connecticut General Statute 16-50x(a). the Council, whether ruling on applications for certificates of facilities or on requests for shared use of towers, may give such consideration to other state laws and municipal regulations as it deems appropriate. This new authority completes the bundle of jurisdiction needed to share towers and avoid their proliferation. The Council's order in this matter thus becomes the final step in the siting process as envisioned by the Legislature. The Council's order permits SCLP to obtain a building permit for the equipment building at this location and to share the use of this tower.

Environmental - As this site utilizes an existing tower and requires only the installation of a 12'x 26' one story equipment building, SCLP's use of this location will cause minimal environmental impact. The equipment shelter is a one story, pebble stone finished prefab building which will not be eye-catching or detract from the surrounding area. Cell sites are unmanned, do not require water or sanitary facilities, and do not increase vehicle traffic to the area. The only outside noise emitted from the site is the operating of the air conditioning units required to keep the equipment cool. As the site operates electrically, it does not emit any air pollutants such as sulphur oxide, nitrous oxide, hydrocarbon or carbon monoxide commonly found as byproducts of combustion. The land is mostly level and the limited construction activities should not cause erosion on the site. Staked hay bales will be used, however, as a precautionary measure. There will be approximately four weeks of construction activity at this site. After construction, only once a week visits by technicians for normal maintenance will occur, thus no significant traffic pattern changes will occur.

Economically Feasible - This location allows the installation of a cell site without the construction of a new tower, and thus provides a direct cost saving to SCLP. A fair rental rate has already been negotiated with the tower owner, as can be seen on Exhibit B of our filing.

Public Safety - The provision of new or improved cellular service within East Hampton through the use of an existing transmitting facility can only improve the safety and welfare of the local residents. This is because the emergency use of cellular service enables police, fire and medical personnel to be contacted quickly in the time of need. Cellular service has been invaluable in disaster relief efforts. Use of this tower will facilitate such relief if the need should unfortunately arise.

In consideration of the above facts, it is evident that SCLP fully supports the Connecticut Siting Council's and General Assembly's goal of shared use of towers whenever possible, and Council approval of SCLP's use of the East Hampton site is clearly in the best interest of both the public and the State.

Springwich Cellular Limited Partnership 227 Church Street New Haven, Connecticut 06510 Phone (203) 771-7381



Peter J. Tyrrell Senior Attorney

July 5, 1994

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



CONNECTICUT SITING COUNCIL

Dear Chairman Gelston:

Enclosed please find a Notice of Intent to Modify an Exempt Tower and Associated Equipment for facilities owned and operated by Howard McAuliffe, Inc. at 65 Midwood Farm Road in East Hampton, Connecticut.

The Springwich Cellular Limited Partnership (SCLP) proposes to add antennas to an existing lattice style radio tower and construct a twelve foot by twenty-six foot equipment building, to be used in providing cellular telecommunications services.

The attached pages detail the required information. As is shown in the attachment, the proposed addition meets all necessary criteria established in the Regulations of Connecticut State Agencies Section 16-50j-72(c), and Section 2 of Public Act 93-268, as amended, in Sections 6 and 7 of Public Act 94-242, and is thus an exempt facility pursuant to Section 16-50j-73.

Please record me as counsel for SCLP in this matter and in all correspondence from the Council.

Thank you for your cooperation.

eter Jyvell

Very truly yours,

Copy to: Honorable Alan H. Bergren, Town Manager, Town of

East Hampton, Town Hall, 20 East High Street,

East Hampton, CT 06424

Mr. Howard McAuliffe, Howard McAuliffe, Inc., 15 Industrial Park Place, Middletown, CT 06457

#### EAST HAMPTON

Pursuant to Section 16-50i(a)(5) of the Connecticut General Statutes and Section 16-50j-72(c) as amended, of the Regulations of Connecticut State Agencies and Section 2 of Public Act 93-268, as amended, in Sections 6 and 7 of Public Act 94-242, for use of a non-facility tower where there would be no substantial environmental effect, the Springwich Cellular Limited Partnership (SCLP) hereby requests approval from the Connecticut Siting Council (Council) to modify an existing telecommunications facility by adding cellular service antennas to an existing lattice style tower and to construct a prefab equipment building containing the The site is located at 65 associated radio equipment. Midwood Farm Road, East Hampton, Connecticut, and is shown on Exhibit A. SCLP has received authorization from the site owner to apply for this approval, as shown on Exhibit B.

#### **BACKGROUND**

The proposed site is owned and operated by Howard McAuliffe, Inc., a radio communications sales, installation and service business. At the proposed site is an existing 120 foot three leg self supporting lattice style tower with three ten foot whip style antennas on top and six additional whip style antennas mounted on the side. This structure was constructed in 1991 and provides radio communications for Mr. McAuliffe's radio business in addition to six other businesses.

#### **DISCUSSION**

SCLP proposes to add three 6 foot tall whip style cellular omnidirectional antennas at approximately the 105 foot level of the tower, in order to supplement its cellular coverage in East Hampton, and along nearby Route 66. The proposed additional antennas will not increase the overall height of the existing tower, as shown on Exhibit C.

The cellular equipment to be used to operate these antennas will be contained within a 12 foot x 26 foot prefab equipment building, which would be placed adjacent to the tower and an existing equipment building used by the owner and other tenants for their radio equipment. This building is almost full and does not have sufficient room for the SCLP equipment.

The power density in the mobile and cellular frequency bands is set forth below. The levels shown indicate the total power density in milliwatts per square centimeter, and have been calculated at a distance of 25 feet from the base of the tower.

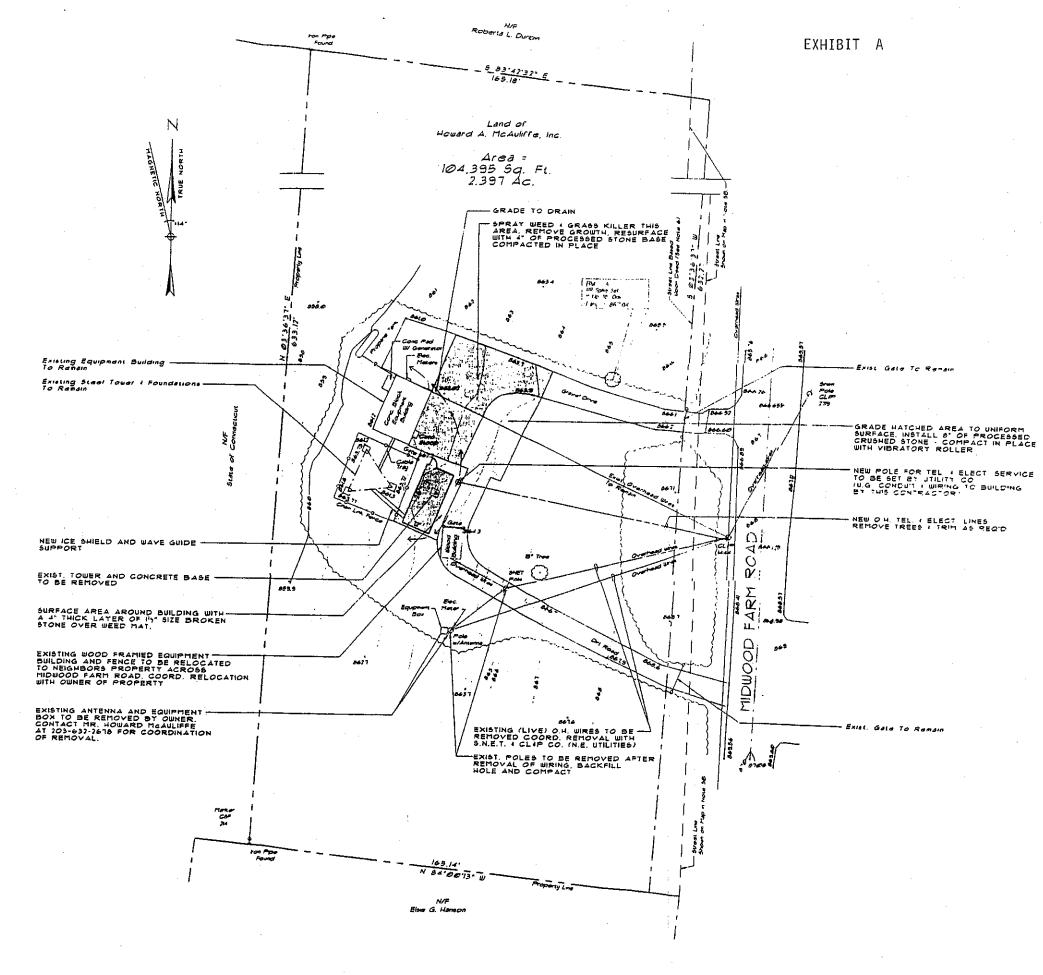
<u>Service</u>	Power <u>Density</u>	Connecticut <u>Standard</u>	Percent of <u>Standard</u>
Mobile	0.0310	0.200	15.50
Mobile	0.0575	0.310	18.55
Cellular	0.0194	0.5867	00.03

The current Connecticut (and ANSI) power density level standards for non-ionizing radiation are shown above. The levels demonstrated in this case are well below the standard levels.

#### CONCLUSION

The proposed addition does not constitute a "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d). This is because there is no change in the tower's height. There is no extension of the boundaries of the site. There will be no increase in noise levels at the site's boundary by six 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 environmental effect. SCLP requests that the Council approve the use of this tower as indicated above and the construction of an associated equipment building.

For the reasons discussed above, SCLP requests that the Council acknowledge that this Notice of Modification meets the Council's exemption criteria.



SITE PLAN

SCALE " = 20-0"

#### EXHIBIT





15 INDUSTRIAL PARK PLACE MIDDLETOWN, CT 06457 TEL. (203) 632-2678 154 CROSS ROAD WATERFORD, CT 06385 TEL. (203) 447-9996



June 27, 1994

Mr. Peter W. Van Wilgen Manager - Contracts and Docket Administration SNET Mobilility, Inc. 555 Long Wharf Drive, 8th Floor New Haven, CT 06511

Dear Peter:

This will confirm that Howard McAuliffe, Inc. and the Springwich Cellular Limited Partnership have reached an agreement for the leasing of antenna space on the tower and land for your associated equipment building on my property located at 65 Midwood Farm Road in East Hampton, Connecticut.

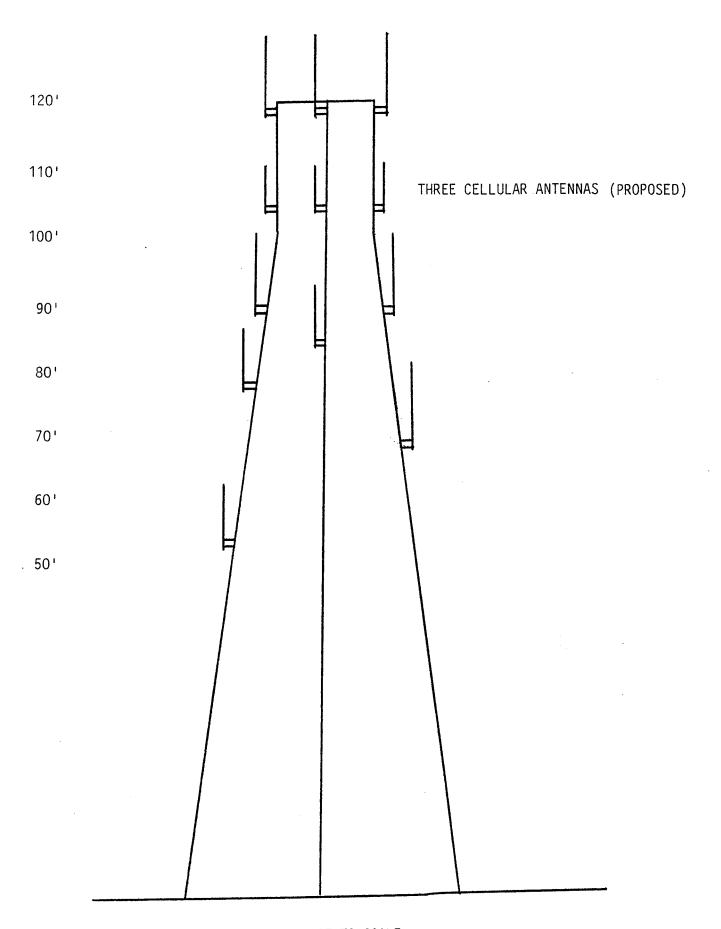
This letter authorizes you to act for me and on my behalf to apply for all necessary local, State and Federal permits, certificates and authorizations which may be required for your use of this location.

Please keep me informed of your progress in these matters. I look forward to having you as a tenant on my tower.

Very truly Yours,

Howard McAuliffe

President



TOWER BASE NOT TO SCALE



K 1 . . .

Peter J. Tyrrell Senior Attorney

July 5, 1994

The Honorable Alan H. Bergren, Town Manager Town of East Hampton Town Hall 20 East High Street East Hampton, CT 06424

Dear Mr. Bergren:

The Springwich Cellular Limited Partnership plans to install cellular antennas and related cellular equipment at the existing building and tower site owned by Howard McAuliffe, Inc. at 65 Midwood Farm Road in East Hampton, Connecticut.

As required by Section 16-50j-73 of the Regulations of State Agencies (RSA), please accept this letter and the attached package to the Connecticut Siting Council (Council) as Notice of Intent of our exempt modification to an existing tower pursuant to RSA Section 16-50j-72(c), and Section 2 of Public Act 93-268, as amended, in Sections 6 and 7 of Public Act 94-242.

Public Act 93-268, as amended, authorizes the Council to grant approval, among other items, for the use of towers not originally certificated by them and the construction of associated equipment buildings. This avoids a lengthy hearing process for the Town and the proliferation of additional towers, by making available numerous towers not previously available for use.

The attached package fully sets forth the Springwich proposal. However, if you have any questions or require further information on these plans or the Siting Council's procedures, please feel free to contact me, or Mr. Joel M. Rinebold, Executive Director, Connecticut Siting Council, at 827-7682.

Very truly yours,

Tetary Tynell

Copy to: Mr. Howard McAuliffe, Howard McAuliffe, Inc., 15 Industrial Park Place, Middletown, CT 06457