



COPY

OCT 16 2015

Craig Warburton
450 West Joy Road, Ann Arbor, MI 48105

10/13/15

Howard Fink, FOIA Coordinator
Northfield Township Manager
8350 Main St., Whitmore Lake, MI 48189

Dear Mr. Fink:

Under the Michigan Freedom of Information Act § 15.231 et seq., I am requesting an opportunity to inspect or obtain copies of public records, specifically regarding the conditional use permit issued in 1993 and the last 3 years radiation testing required by that conditional use permit, for the cell tower on the corner of Joy and Whitmore lake roads. The tower was permitted to Ameritech and is on land leased from the Gould family.

If there are any fees for searching or copying these records, please inform me if the cost will exceed \$20.00

The Michigan Freedom of Information Act requires a response to this request within five days. If access to the records I am requesting will take longer than this amount of time, please contact me with information about when I might expect copies or the ability to inspect the requested records.

If you deny any or all of this request, please cite each specific exemption you feel justifies the refusal to release the information and notify me of the appeal procedures available to me under the law.

If any documents are redacted, please provide an explanation.

Thank you for considering my request.

Sincerely,

P.21
10-23-15

10-21-15 Per
Lawrence Behr Associates

Flood in 1999 - records
destroyed

Could try getting info
from owner of equipment

mlb

 **COPY**

*minutes sent
to applicant
10/12/93
uc*

PLANNING COMMISSION MEETING SEPTEMBER 15, 1993

4

Roll Call: Seamon, no; Briggs, yes; Wenger, no; Ehnis, no; Cronic, yes. Vote is 2-3 AGAINST. Motion is defeated.

Recommendations to the Township Board is that this not be rezoned to SR2.

UNFINISHED BUSINESS

CU-2-93 DETROIT SMSA LIMITED PARTNERSHIP; Seeking CU under Section 11.03I to erect 184' monopole for cellular telephone service. Also an unmanned equipment shelter would be placed on site. 50'x50' area, tax code number 02-32-200-006, 115 W. Joy Road, total parcel 8.3 acres.

Cronic explained that he has excluded himself from the vote based on ethical reasons due to financial arrangement with 2 of the petitioners, this is a conflict of interest.

Dave Rowe had a point of order, I think that if you are going to exempt yourself from the voting you also can not participate in the discussion prior to that vote, as a member of the audience yes, but not as a Board member.

Cronic asked Mr. Ehnis to take over the chair.

Carty read the correspondence (see file).

Letter: From Craig & Brenda Warburton, dated 8/30/93, Against the petition.

Letter: From Craig Warburton, dated 9/1/93, Against the petition

Letter: From Washtenaw County Sheriff, From Ronald J. Shevel, dated 9/7/93, Support of the petition.

Letter: From Cross Wrock, dated 9/10/93, Support of petition

Letter: From Don Justesen, to Janine Halushka, dated 8/27/93, Support of petition.

Letter: From Alan Isreal, Mayor of City of Milan, Chairman Central Dispatch Authority, dated 9/14/93, Support of Petition.

Letter: From Louise Curry, Against the petition.

Letter: From Linda Cind, Against the petition.

Todd Wells from Ameritech gave a presentation of what they wanted to do. Summary of the speech follows: We have been here a number of times, we have brought our search area map and showed it to you. We looked for an ideal spot that would allow this tower. We have found a perfect location that is relatively removed from

COPY



PLANNING COMMISSION MEETING SEPTEMBER 15, 1993

5

residential uses. We have been able to lease a 50'x50' section of property on the corner of Joy and Whitmore Lake roads. Trying to conceal the tower in the wooded area, we are able to remove the least number of trees and we angled the access road so it would not be viewed from the road. We initially selected a tower of 263' because that is what the engineers told us would best serve rest of the towers in area. We came in on 7/7/93 and took careful notes, we answered some concerns and came back on 8/18/92, we had made revisions. When we came back it was with a monopole tower taking the height to 184', which takes it down below the FAA light standards, it does not need a light on top. Another concern was the health issue, we have brought in information for the Board to review, I read Mr. Warburton's articles and wondered what the answers would be, I contacted Dr. Justesen, leading expert in his field, I think that Dr. Justesen's conclusions should be instructive to the Board. I have tried to answer all of the concerns that the Board had and the residents had.

Todd went on to say he was prepared to show the grid study that was requested by Jean Hornback last month. Ehnis suggested that he do that. Todd then introduced Jenny Tishner, a Radio Frequency Engineer with Ameritech Mobil to discuss the grid system. Jenny went over the grid process and how it works.

Todd went on to explain the benefits of having the tower which are the extended 911 service which is public safety and the property tax revenue is also a benefit.

Todd went on to compare the ordinances to being the law, and went on to explain some of the ordinances to the Board and audience. First he stated that according to the ordinance we are defined as a public utility and he read the definition, he then went over what is required of Ameritech to place this tower according to Sec 11.03I which states that public utilities are permitted w/ a conditional use. Todd went over the factors to consider and stated that first he looked at any exceptions, the one exception he found was in Sec. 55.07D height requirements. The rest of the factors were found in Sec 50.08 A-G. He read each standard and answered every one in favor of Ameritech, he looked at past decisions of other PC Boards. Todd explained that according to the law, the fact that the PC allowed the Cellular One Tower, they had to allow this tower because the precedent had been set.

Todd went over each standard, he answered each standard as follows:
A: We have already made that finding with respect with the Cellular Tower, previously you have said yes, I hope tonight you do the same.

B: Looked at Land Use Plan, and it remains the current zoning classification, I also looked that this is a rural area and immediately adjacent to US 23, high tension lines, and the Cellular One Tower. Clearly there are other uses and those factors must be

considered.

C: This tower is silent except for a room air conditioner, the structure is visited once a month, clearly a small impact on the public utilities.

D: I look no further than Dr. Justesen, I also look at the other Cellular Tower, the Edison lines, and the highway are all factors that must be considered. I submit that with all of the materials submitted there is no actual evidence that in any way do these towers cause any hazard to anyone. Key words, to low in power, to low in frequency.

E: See C.

F: This is within the intent of the ordinance and of the zoning district in which it is located, we have already addressed that.

G: A catch all of the items addressed above.

These finding have already been addressed in the past, they were met by a couple of members on the Board today. These findings, the court tells us are precedent for your decision tonight. We believe that it is very important for you to be aware of that because I believe there are concenquences when we don't always remember to follow precedent, and I am sure that we will.

Todd went on to say that we have an order from the FCC that we will come into our given district, your given area, and provide cellular service. That is what we have done, that is what we are attempting to do here. We are doing this according to FCC dictate. We have given you all of the information, we had addressed your concerns. In the bottom line, what it comes down to is the ordinance, and as we have demonstrated from prior decisions of this very board; the Board had determined that a conditional use is appropriate for an 184' cellular tower in AR zoning. We would ask that you not deviate from that precedent, we submit to you that we have met every requirement under your ordinance, which is all that matters, and that we are an appropriate candidate for approval of a conditional use application.

Pennington gave his report (see file); summary below. I have researched this issue. As far as technical requirements I have mentioned in my report that should be on the site plan. Todd knows about them and they should be on the site plan. In going through this site plan, according to what is required in the ordinance this submittal does meet the requirements of preliminary site plan review. The issue of Health and Safety, I have looked in to it. There is one study that was done in Wilmette IL, it was sanctioned by the Board of Health that deals specifically with this issue of the safety of a cellular tower, I do not have a copy of it, in general form the report substantiates what Mr. Justesen has had to

say as far as the safety of that. I have looked for what is termed the "evidence of harm". I have not seen any document that anyone has been harmed. I suggest that the items on the report have to be on the motion.

No Board discussion. Public was heard.

Craig Warburton (450 Joy Rd.) wanted to know how much of the 350 pages of data he introduced had been read. The Board answered his question. Craig commented that he wanted to stop the other precedent and he was starting a petition to do so. Craig also commented that Ameritech was not a public utility according to the Public Service Commission. He also commented that heresy reports would be nice for everyone to bring up but we have to deal with fact, if you don't have the data don't bring it up. Craig wanted the PC to take the attitude of having to see tissue samples, theoretical studies, and not to react to eagerness of giving money to Township. Craig read portions of two letters he had submitted and asked the PC to at least acknowledge that there was a problem. As reasonable human beings you can not look at both sides of this and make a decision one way or the other unless you think that you are more educated than all of these scientists. I am not capable of deciding who is right and who is wrong but I sure the heck made a hell of a case that there is another side of it and if you approve this tower it is terribly imprudent and awfully irresponsible.

Other audience who were very opposed to the tower being erected gave reasons such as: Ameritech lied to the Sheriff and Mayor Isreal telling them there is no 911 service in this area; Ameritech only wants to increase its service not provide basic service; it was not a good idea to solicit support from the Sheriff and Mayor Isreal and gave them misguided information; health issue; they don't want to see the tower, it will be an eyesore;

Motion by Seamon to close the public hearing, support by Wenger; all yes, CARRIED.

Wenger stated that he was trying to see a compelling reason to change the direction of previous activity and I must say that the presentation was a bit forceful and strong in reminding me of my duties here and I can figure my duties out and I can act on my own and that doesn't set well with me but it also doesn't impact me to where I am going to ultimately end up. I can't find any evidence of harm that would cause me as a commoner without the background to try and put myself in a scientific position here to create findings that no other scientist can come up with. No one says that there is any harm, many have tried to look for the fire. This leads me to believe that we are basically back to zoning issues. Is this a conditional use - yes. Does the parties land seem to be a good place to put it without regard to statistical aspects of the gridding - yes. I haven't heard any complaints on the other two

towers. This basically takes me to where I don't see that I have much latitude in this, it is an appropriate use on a parcel for something that seems to be an ok item, I can't disprove that. I have no choice but to accept.

Seamon stated that she appreciated the improvement that Ameritech has tried to make, I also did not appreciate the presentation, I don't like to be bullied, it won't change the way that I am voting. I am still concerned with the health aspects. With as many studies that are out there, either harmful or not; as long as there is a study out there that proves that it is, it worries me, it concerns me. That reasoning alone and in our ordinance it says as long as it does not endanger the health, safety of the residents; and that right there is why I will vote it down.

Ehnis stated that he had talked to 2 different electrical engineers and there questions to me was out of those complaining, how many of them have a mobile phone? I couldn't answer the question and right now I doesn't make any difference. The thing that they both expressed was the danger from that as far as they knew was almost nothing and that is what I have to go on.

Robert Lupi asked to make a comment, he wanted Ehnis to read the bottom of page 79, 2nd par, Sec 50.01.

Ehnis read the paragraph (This ordinance, therefore, requires approval). I think it is something that has been said before, once they meet all of the conditions it becomes a matter of approval.

Pennington stated that this is not a paragraph that the township has latitude in putting in, my comments from the last meeting came from the State Act 184 and that is wording basically out of the State Act and it is something that has been placed upon the township.

Motion by Wenger to approve CU-2-93 Detroit SMSA Limited Partnership seeking conditional use under Sec 11.03I to erect 184' monopole for cellular telephone service. Also an unmanned equipment shelter; tax code number 02-32-200-006, based on Sec 50.08 being satisfied A-G and I would make to subject to and contingent on approval of the Final Site Plan for the site.

Motion died from lack of support.

Motion by Seamon on CU-2-93 Detroit SMSA Limited Partnership seeking conditional use under Sec 11.03I to erect 184' monopole for cellular telephone service. Also an unmanned equipment shelter to be placed on that site. Tax code number 02-32-200-006 be denied based on Sec 50.08A that it will be harmonious and in accordance with the objectives and regulations of this ordinance - I do not feel it harmonious. Support by Briggs.

Wenger asked what is harmonious with the ordinance?

Seamon said harmonious with the properties around it. If it were a tree it would be harmonious; if it were a bird, it would be harmonious. Metal cold pole up there is not harmonious.

Wenger said on that basis, cars are not harmonious, telephone polls are not harmonious, etc. You have got other towers in the area. I find no compelling reason to change any of the previous actions. I find that our conditional use - everything is ticked off. Basically it sounds to me as though people do not wish to see it there and on a personal basis are choosing to somehow to exit when the ordinance and the law you have no alternative. You might take input from your planner, I see it as leaving yourself wide open.

Roll call: Briggs, yes; Seamon, yes; Wenger, no; Ehnis, no. Vote 2-2. Vote tied.

Pennington read Sec 50.07, which states that the Planning Commission shall review the application and shall approve, approve with conditions, or deny a conditional use permit application. You have to take action.

Ehnis said and no action has been taken.

Robert Lupi stated that the option to deny the motion is defeated and so the option to deny is lost.

Todd Wells asked if they could talk about conditions.

Discussion was held on conditions that could be placed on the tower.

Motion by Wenger to approve CU-2-93 Detroit SMSA Limited Partnership seeking conditional use under Sec 11.03I to erect 184' monopole for cellular telephone service. Also an unmanned equipment shelter; tax code number 02-32-200-006, based on Sec 50.08 being satisfied A-G and I would make to subject to and contingent on approval of the Final Site Plan for the site. Support by Briggs.

Discussion:

Seamon asked Don if she had to approve this.

Pennington stated that the ordinance gives you 3 options. The state dictated in State Act 184 what can happen.

Seamon said so even if in my opinion those are not met I still have to approve this because the right to deny has already been denied

Pennington said you have stated that one of the finding of fact in this ordinance has not been met, if you believe that then that is what you base your decision on. You have that right as a Planning Commission to do that, you have to justify that right.

Roll Call: Seamon, no; Wenger, yes; Briggs, yes; Ehnis, yes. Vote 3-1 in Favor. Motion is CARRIED.

Cronce took his chair back again.

PR-1-93 WILLACKER HOMES; 02-19-200-018; Application for private road, Vintage Drive, located north of North Territorial, west of US 23. Tabled from 6/16 and 7/21/93 PC meetings.

Dave Willacker gave a presentation to the Board. Summary: At this point we have been in contact with all parties that had questions it is my understanding that we have satisfied all considerations at this point.

Carty read correspondence (see file).

Ltr: From Fletcher DesAutels, dated 9/14/93, recommendation to approve.

Motion by Ehnis to approve PR-1-93 for a private road, support by Briggs. All yes, CARRIED.

NEW BUSINESS

SP-9-93 TOTAL PETROLEUM, INC.; Seeking preliminary site plan approval for northwest 2.24 acres of parcel with tax code number 02-17-300-008; 284 Six Mile Road for the purpose of constructing a gasoline/diesel station, convenience store with deli and bakery and inside seating. Zoning is HC.

Cronce said that based on some clearances HC is the only zoning on that parcel we are being told that was an error. Clarification of the error was made by Washtenaw County.

Greg Ulrich stated that the PC has revision #5 which also reflects a good deal of input from Mr. Pennington. The process has been moving forward to the point where we are maybe only 4-5 items away from Final Site Plan approval. The petition before the Board this evening is for a preliminary site plan approval. Mr. Pennington has provided a report which we have read and have agreed upon. Total's interest is to build this as timely as possible, to try and get this in before the digging has to be stopped because of the weather. This is the only reason we are pushing this.

Pennington gave his report (see file). Summary: I believe we have received previously some correspondence from the County Road Commission that at least tentatively they have given approval of this activity accessing Six Mile Road at this point; but I would



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Greenville, North Carolina 27834
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252-752-9155 FAX
Email: lbassc@lbagroup.com

Lawrence Behr Associates, Inc.

Radio Frequency Environmental Measurements Conducted in the Vicinity of Ameritech Cellular Site #51, Northfield Township, Ann Arbor, Michigan

for 115 Joy Road

RECEIVED

JAN 19 1999

BUILDING / PLANNING
DEPARTMENT

*Northfield Township Planning
Commission
Whitmore Lake, Michigan*

January 13, 1999



TELECOMMUNICATIONS CONSULTANTS

NOTICE

This work is based on our best interpretation of available data. However, this data and its interpretation is constantly changing. Therefore, we do not warrant that any undertaking based on this report will be successful, or that others will not require further research or actions in support of this proposal or future undertaking. In the event of errors, our liability is strictly limited to the replacement of this document with a corrected one. Liability for consequential damages is specifically disclaimed. Any use of this document constitutes an agreement to hold Lawrence Behr Associates, Inc. and its employees harmless and indemnify it for any and all liability, claims, demands, litigation expenses and attorney fees arising out of such use.

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GREENVILLE, NORTH CAROLINA

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Radio Frequency Environmental Measurements Conducted in the Vicinity of Ameritech Cellular Site #51, Northfield Township, Ann Arbor, Michigan

for

*Northfield Township Planning Commission
Whitmore Lake, Michigan*

Introduction

This study has been conducted to quantify the electromagnetic fields produced by the Ameritech Cellular site #51 installation at 115 Joy Road in Northfield Township, Ann Arbor, Michigan at selected test locations north of the site. The measured power densities will then be compared to the currently relevant national exposure standard to ensure that the general public will not be exposed to excessive radio frequency (RF) fields.

Methodology

The two measurement sites chosen for this study were guided by the minutes of the Northfield Township Planning Commission meeting of 24 January, 1995, and are the same as all previous reports to the commission, namely, 300 feet and one half mile north of the Ameritech site #51.

The selected, calibrated test equipment was capable of measuring RF field strengths across the cellular frequency band. The test equipment suite consisted of a Hewlett Packard model 8594A Spectrum Analyzer and an A.H. Systems model SAS-200/510 log periodic antenna. All measurements were performed with the antenna mounted on a tripod at a height of approximately two meters and appropriately oriented towards the Ameritech antenna tower for maximum field strength. All measurements were performed in accordance with OET bulletin 65 and as well as the manufacturers recommendations for the test equipment. The measurement procedures were straight forward, and employed no adaptations to accommodate the study objectives.

Ameritech Cellular was not informed of the date and times of the measurement activity. The field measurements were performed by Mr. Michael W. Hayden, NCE of Lawrence Behr Associates, Inc. (LBA) on 8 January, 1999 beginning at 6:00 PM and consisted of monitoring and recording the Ameritech Cellular field strengths over a period of thirty minutes at each test location.

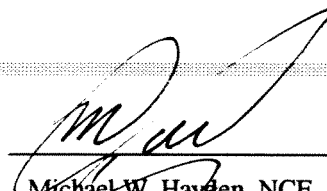
Results and Conclusions

The maximum permissible exposure (MPE) allowed for general public exposure at cellular frequencies, as defined by FCC OET bulletin 65, is 580 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The maximum measured power densities at the two sites and the percentage of the MPE that they represent are as follows:

Test Site	Power Density ($\mu\text{W}/\text{cm}^2$)	MPE ($\mu\text{W}/\text{cm}^2$)	% of MPE
300' North	0.00200	580	0.000345%
0.5 mi. North	0.001531	580	0.000264%

The levels presented in Table 1 are the maximum power density measured for eight channels averaged over a 30-minute period. Assuming a "Worst Case Condition", with all nine channels operating simultaneously, the maximum exposure would be $0.027 \mu\text{W}/\text{cm}^2$ which would constitute 0.045% of the MPE. Based on the above findings, it is determined that the RF emissions at this location fall far below the allowable exposure levels for this frequency band.

January 13, 1999


Michael W. Hayden, NCE
Director of Engineering

NARTE Certification #E1-00384

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Annex 1.0

Qualifications of Project Team

Northfield Township Planning Commission Whitmore Lake, Michigan

Lawrence Behr Associates, Inc. is a telecommunications consulting firm headquartered in Greenville, North Carolina which has been providing service to the wireless industry for over 30 years.

The team assembled for this project consists of the following personnel:

Project Engineer: Michael W. Hayden, N.C.E.
Radio Frequency Engineer: Raymond E. Rohrer, P.E.
Project Consultant: Lawrence V. Behr

Project Engineer: Michael W. Hayden, N.C.E.

Mr. Hayden is a graduate Electrical Engineer and is licensed by the Federal Communications Commission as well as being a Certified Telecommunications Engineer by the National Association of Radio and Telecommunications Engineers. Mr. Hayden has over 25 years of telecommunications engineering experience with the Department of the Navy as well as the civilian community. Mr. Hayden is also a Director and member of the Executive Committee of the National Association of Radio and Telecommunications Engineers.

Radio Frequency Engineer: Raymond E. Rohrer, P.E.

Mr. Rohrer has served the wireless industry in the area of radio frequency field measurement and testing for over 40 years. His prior experience includes design, installation and testing of broadcast systems for the public and private sector. He has appeared as an expert before the Federal Communications Commission in the areas of antenna radiation and licensing issues.

Project Consultant: Lawrence V. Behr, CEO

Mr. Behr established Lawrence Behr Associates, Inc., in 1963 and since that time has provided services in the areas of radio frequency engineering, interference analysis, broadcast system design, radio frequency propagation, field intensity measurement and analysis. He has served as an expert witness in matters related to radio frequency systems in zoning hearings, the courts, and the Federal Communications Commissions (FCC). His expertise in radio frequency fields extends through the microwave area, and has resulted in patents on antenna radiating systems. Mr. Behr is a Certified Electromagnetic Compatibility (EMC) Engineer and is FCC licensed. Mr. Behr is also a Director and member of the Executive Committee of the National Association of Radio and Telecommunications Engineers.

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LAWRENCE BEHR ASSOCIATES, INC.
TELECOMMUNICATIONS CONSULTANTS

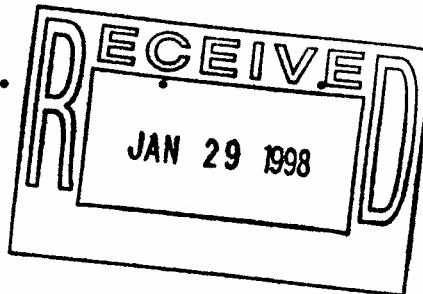
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Lawrence Behr Associates, Inc.

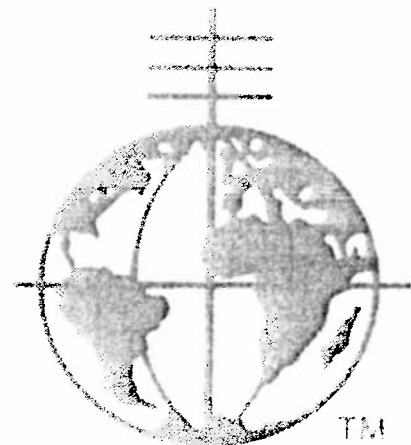
**Radio Frequency Environmental
Measurements Conducted in the
Vicinity of Ameritech Cellular Site #51,
Northfield Township, Ann Arbor,
Michigan**

for



*Northfield Planning Commission
Whitmore Lake, Michigan*

January 26, 1998



LBA

TELECOMMUNICATIONS CONSULTANTS

Radio Frequency Environmental Measurements Conducted in the Vicinity of Ameritech Cellular Site #51, Northfield Township, Ann Arbor, Michigan

for

*Northfield Planning Commission
Whitmore Lake, Michigan*

Introduction

This study has been conducted to quantify the electromagnetic fields produced by the Ameritech Cellular site #51 installation at 115 Joy Road in Northfield Township; Ann Arbor, Michigan at selected test locations north of the site. The measured power densities will then be compared to the currently relevant national exposure standard to ensure that the general public will not be exposed to excessive radio frequency (RF) fields.

Since the last report of January 1997, the Federal Communications Commission (FCC) has adopted new standards for RF exposure. The new standard is detailed in the FCC Office of Engineering and Technology (OET) bulletin 65, edition 97-01, "*Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*". The new standards are slightly more restrictive, but only at frequencies greater than 1500 Megahertz (MHz). Cellular band frequencies, 869 to 895 MHz, are not affected by OET bulletin 65.

Methodology

The two measurement sites chosen for this study were guided by the minutes of the Northfield Township Planning Commission meeting of 24 January, 1995, and are the same as all previous reports to the commission, namely, 300 feet and one half mile north of the Ameritech site #51.

The selected, calibrated test equipment was capable of measuring RF field strengths across the cellular frequency band. The test equipment suite consisted of a Hewlett Packard model 8594A Spectrum Analyzer and an A.H. Systems model SAS-200/510 log periodic antenna. All measurements were performed with the antenna mounted on a tripod at a height of approximately two meters and appropriately oriented towards the Ameritech antenna tower for maximum field strength. All measurements were performed in accordance with OET bulletin 65 and as well as the manufacturers recommendations for the test equipment. The measurement procedures were straight forward, and employed no adaptations to accommodate the study objectives.

Ameritech Cellular was not informed of the date and times of the measurement activity. The field measurements were performed by Mr. Marvin Brewer of Lawrence Behr Associates, Inc. (LBA) on 7 January, 1998 beginning at 11:00 AM and consisted of monitoring and recording the Ameritech Cellular field strengths over a period of thirty minutes at each test location.

Results and Conclusions

The maximum permissible exposure (MPE) allowed for general public exposure at cellular frequencies, as defined by FCC OET bulletin 65, is 580 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The maximum measured power densities at the two sites and the percentage of the MPE that they represent are as follows:

Test Site	Power Density ($\mu\text{W}/\text{cm}^2$)	MPE ($\mu\text{W}/\text{cm}^2$)	% of MPE
300' North	0.0001	580	0.00001%
0.5 mi. North	0.003	580	.0005%

The levels presented in Table 1 are the maximum power density measured for a single cellular channel. Assuming worst case conditions, with all nine channels operating simultaneously, the maximum exposure would be $0.027 \mu\text{W}/\text{cm}^2$ which would constitute 0.045% of the MPE and are clearly far below the allowable exposure levels for this frequency band.

Annex 1.0

Qualifications of Project Team

Northfield Planning Commission *Whitmore Lake, Michigan*

Lawrence Behr Associates, Inc. is a telecommunications consulting firm headquartered in Greenville, North Carolina which has been providing service to the wireless industry for over 30 years.

The team assembled for this project consists of the following personnel:

Project Engineer: Marvin L. Brewer
Radio Frequency Engineer: Raymond E. Rohrer, P.E.
Project Consultant: Lawrence V. Behr

Project Engineer: Marvin L. Brewer

Mr. Brewer holds Bachelor of Science degree in Electrical Engineering from San Diego College of Engineering. He has served the telecommunications industry since 1968 and specializes in radio frequency hazard measurement and evaluation and radio frequency interference. He was the principal engineer in the U. S. Navy Hazards of Electromagnetic Radiation to Personnel (HERP) program from 1989 to 1994. Mr. Brewer has provided expert testimony in the area of compliance to hazardous exposure standards for radio frequency signals. Mr. Brewer is a Certified Electromagnetic Compatibility (EMC) Engineer.

Radio Frequency Engineer: Raymond E. Rohrer, P.E.

Mr. Rohrer has served the wireless industry in the area of radio frequency field measurement and testing for over 40 years. His prior experience includes design, installation and testing of broadcast systems for the public and private sector. He has appeared as an expert before the Federal Communications Commission in the areas of antenna radiation and licensing issues.

Project Consultant: Lawrence V. Behr, CEO

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Clearly the best choice for all your environmental needs.

February 19, 1999

Mr. Osbert Williams
Supervisor
P.O. Box 576
Whitmore Lake, MI 48189

Mr. Williams:

Argent is submitting radio frequency radiation surveys for the Nextel tower site and the AT&T tower site. The RFR survey comprises of a physical radiological assessment and measurements, plot plans, topographical maps, and site photographs.

Should you have any questions, please contact me.

Respectfully,

Bobby Aguilar
Radiofrequency Specialist



COPY

**NORTHFIELD TOWNSHIP
AT&T TOWER SITE
RADIOLOGICAL ASSESSMENT
FOR EXPOSURE TO
RADIOFREQUENCY RADIATION**

February, 1999

**Prepared for:
Northfield Township
P.O. Box 576
Whitmore Lake, Michigan 48189**



Clearly the best choice for all your environmental needs.

February 19, 1999

Northfield Township
Mr. Osbert Williams
Supervisor
P.O. Box 576
Whitmore Lake, MI 48189

Re: Radio Frequency Radiation Survey of (Ameritech) tower site at Whitmore Lake, MI

Mr. Williams:

Enclosed is a radiological assessment for Radio Frequency Radiation (RFR) on an Ameritech Communications tower facility located at latitude 42.21.21 (north) and longitude 83.43.40 (west) in Ann Arbor, Michigan. Said survey was conducted on the 28th and 29th January 1999 by Mr. John Carrillo, et al.

This facility has residential population occupancy with one house located at one half-mile distance from the said site. The site consisted of one transmitter room constructed of wood and drywall. The principle antenna is a 175-foot monopole.

This structure was secured (by a single gate fence) with an onsite meter stand and enclosed transformers. This facility is located at the corner of Joy Road and Whitmore Lake Road in Ann Arbor East, Michigan Quadrangle. This is a secured facility and the radiological assessment was conducted on the outside of the enclosure, which is considered to be an unrestricted area for the general public.

The radiological survey was conducted with the following instrumentation:

Instrument Manufacture	Meter Model Number	Meter Serial Number	Probe Model Number	Probe Serial Number	Calibration Date
Narda	8712	02055			1/99
Narda			8722B	17020	1/99

We have enclosed the exposure levels from the survey, photographs, and plot views. All readings are recorded in exposure units related to the percent of standards allowed for Maximum Permissible Exposure (MPE) for electric and magnetic field strength. Readings taken at the time of the survey are below the current standard. All readings were at ambient background levels between 0.30 percent and 0.70 percent of the current standard. They should not present any radiological hazard at the fence line to the general public under normal occupancy standards.

Should you require subsequent information, please feel free to contact us.

Respectfully,

Bobby Aguilar
Radiofrequency Specialist

cc: Greg Haunschild
Tonia P. Archibald
File

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**RADIOLOGICAL ASSESSMENT
OF
RADIO FREQUENCY RADIATION SURVEY**

FENCE LINE - 72' x 72'

PHONE BOX

GATE

330'

METER STAND

DETROIT
EDISON
BOX

TRANSFORMERS

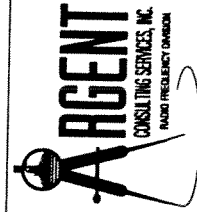
EQUIPMENT HUT

TOWER

Nextel Antenna Information
Height - 220'
Number of channels - 3 per sector
Number of sectors - 3
Watts per channel - 54 ERP
LAT 42° 21' 21"
LONG 83° 43' 40"

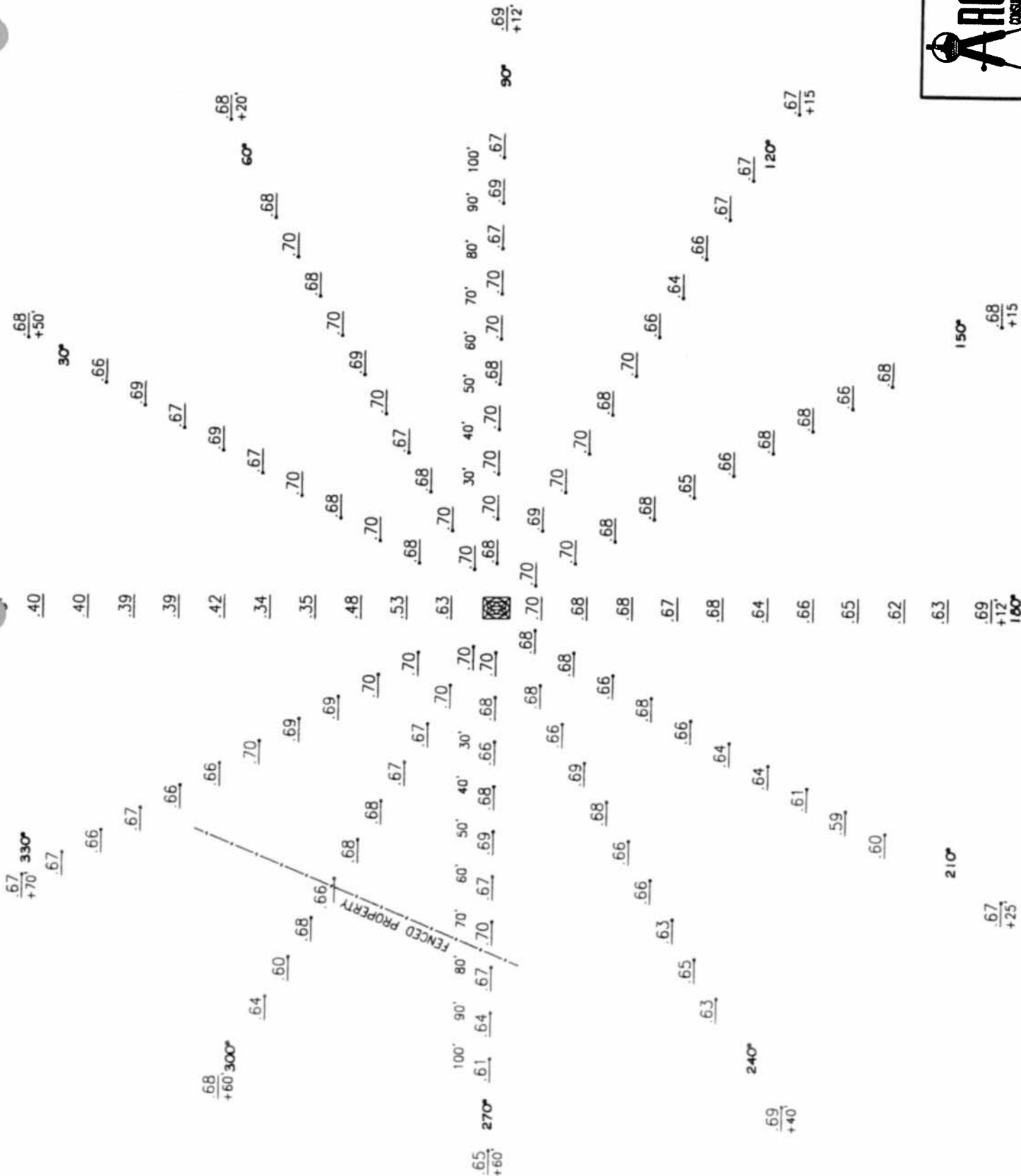
AT&T Antenna Information
Height - 175'
Number of channels - 2 per sector
Number of sectors - 3
Watts per channel - 100 ERP
LAT 42° 20' 40"
LONG 83° 45' 07"

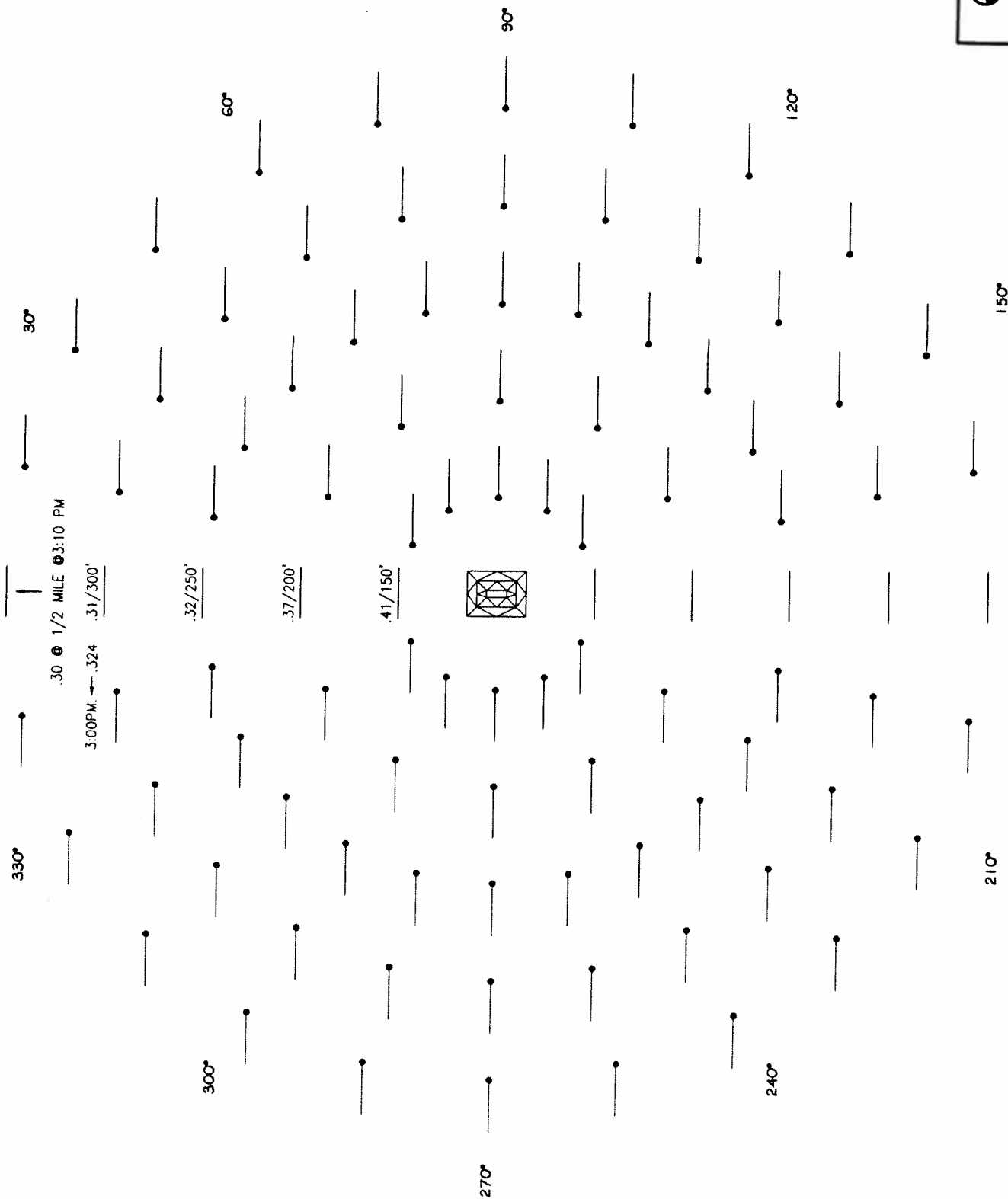
REVISIONS/NOTES



NORTHFIELD TOWNSHIP
ANN ARBOR, MICHIGAN
RF SURVEY
PLOT PLAN
SCALE 1" = 12'
FIGURE NUMBER
DATE 2/16/99
DRAWING SERVICES

FILENAME: C:\AD\AGENT\RT\ANN-PP





TOPOGRAPHICAL MAP

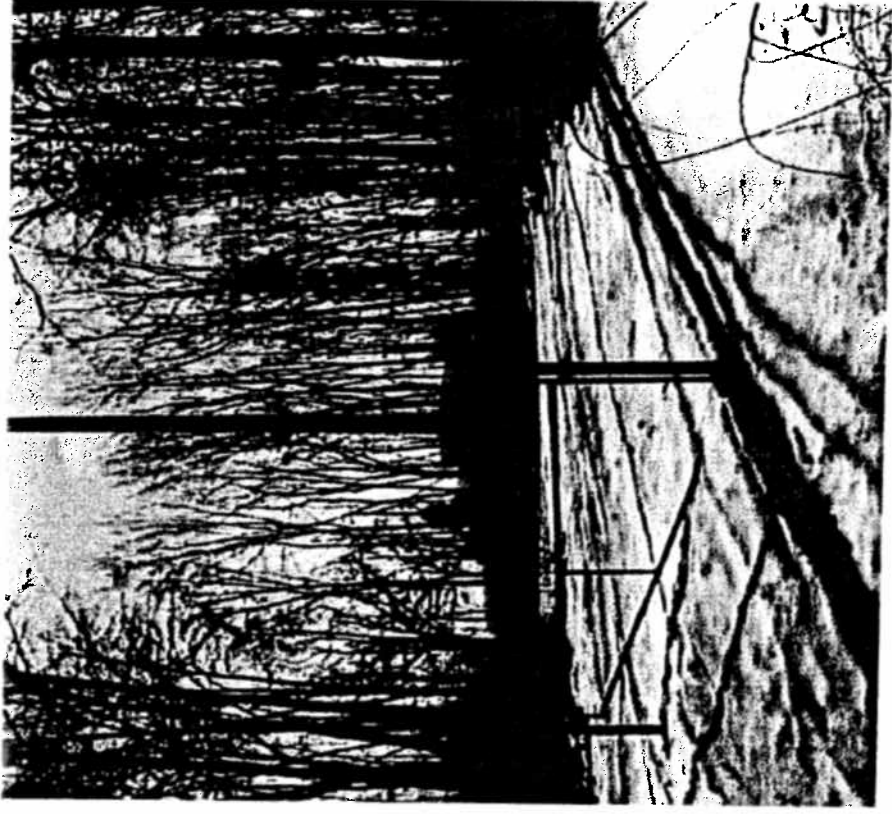
SITE PHOTOGRAPHS

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



- West view of residence from Joy Road
- Located one half-mile from tower site
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



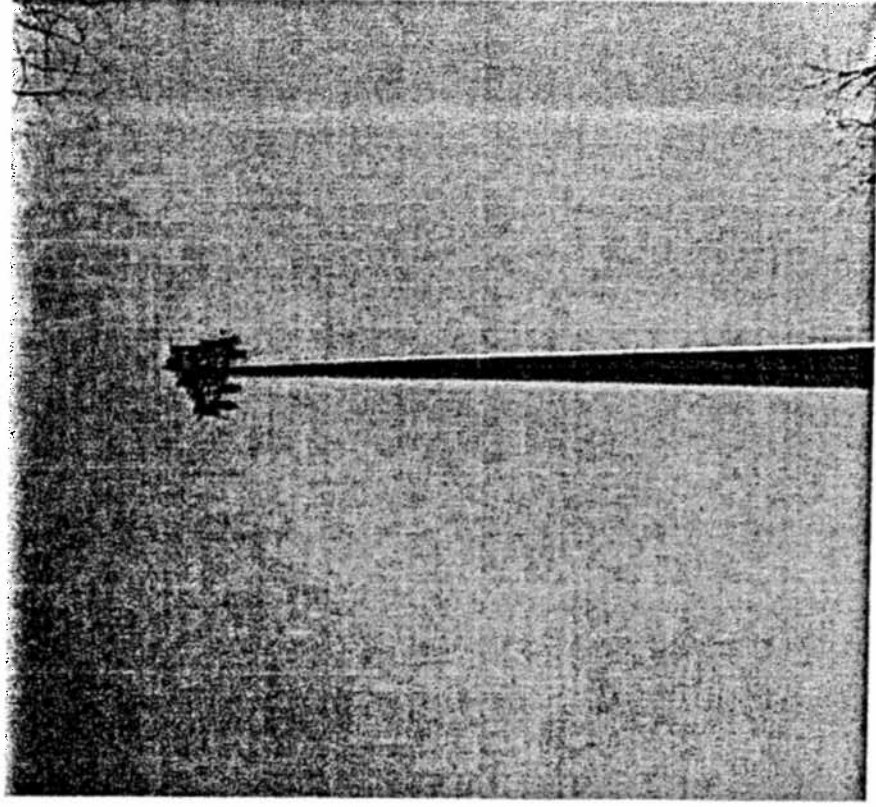
- North view from Joy Road
- Monopole and Control room
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



- North view from Joy Road
- Monopole and Control Room
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



- Top View of Monopole
- AT&T (175 foot) Monopole
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



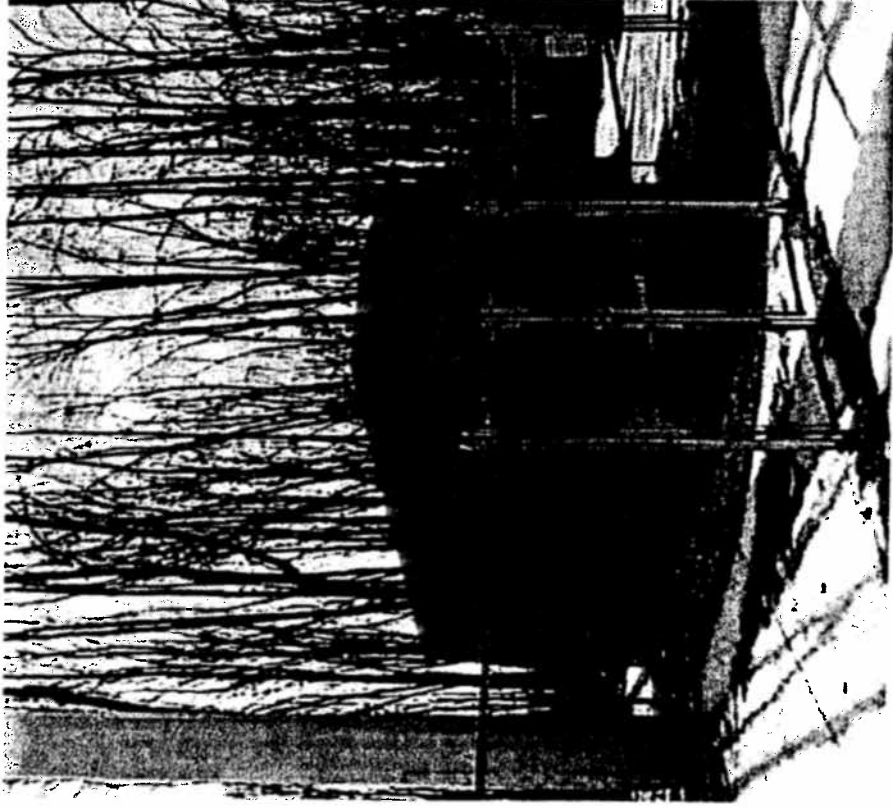
- North and West view of Control Room
- East view of Monopole
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



- Cable Run from Control Room to Monopole
- East view of Control Room
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



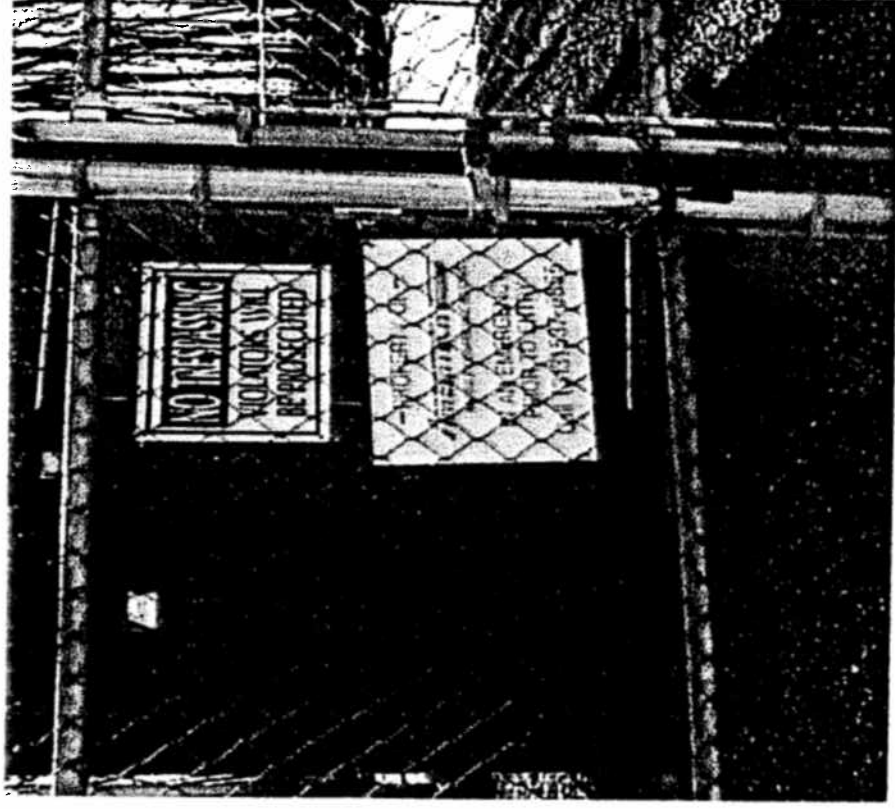
- Control Room Profile
- North and East view of Control Room
- Low view of Monopole
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



- South view of nearest roadway to tower site
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)



- Ameritech Identification Sign
- North view of Control Room
- View of physical barriers (lock, and fence)
- January 28, 1999

Northfield Township Radio Frequency Radiation Survey (Ameritech Communications)

- Street Coordinates
nearest to tower site
- January 28, 1999

