

ORIGINAL ORIGINAL
BEFORE THE FILE RECEIVED
Federal Communications Commission SEP 30 1992
WASHINGTON, D.C.

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

IN RE APPLICATION(S) OF:) MM Docket No. 92-132
)
CARNEGIE-MELLON STUDENT GOVERNMENT) File No. BPED-891108MA
CORPORATION)
(WRCT-FM, Pittsburgh, PA))
)
HE'S ALIVE, INCORPORATED) File No. BPED- 900606MC
(Murrysville, PA))
)
For Construction Permit)

To: Hon. John M. Frysiaak, Administrative Law Judge

PETITION FOR LEAVE TO AMEND

CARNEGIE-MELLON STUDENT GOVERNMENT CORPORATION ("CMSGC"), by Counsel, and pursuant to Sections 73.3522 and 73.3525 of the Rules, hereby respectfully petitions the Presiding Judge for Leave to Amend its Application for major in the facilities of WRCT-FM, Pittsburgh, Pennsylvania. In support whereof, the following is shown.

1. THE AMENDMENT

1. Attached hereto is an Amendment to the pending Application of CMSGC. The Amendment (1) updates the list of officers and directors of CMSGC, and (2) proposes to amend the technical proposal of the Applicant as follows:

- (a) The HAAT is corrected to read 22 meters instead of 16 meters. This change is a change in method of computation only and does not affect the actual height above ground or above mean sea level, which remains the same as the licensed facilities. The Consulting Engineer explains the basis for the recalculation and why he believes it is more accurate than the HAAT originally specified in 1979.

No. of Copies rec'd 0 + 6
List A B C D E

- (b) The antenna originally specified in the Application will be replaced by a directional antenna with an equal number of bays. No change in antenna height is being made.
- (c) The maximum ERP of the directional antenna in any direction will be 1.77 kW (H&V). The maximum ERP in the direction of the facility proposed by He's Alive, Incorporated ("HAI") will be 0.68 kW (H&V).
- (d) The proposed directional facility, when compared with the revised directional facility being proposed by HAI by contemporaneous amendment, will eliminate the mutual exclusivity between the current proposals, thereby permitting grant of both applications.

2. GOOD CAUSE SHOWINGS

2. Section 1.65 of the Rules requires applicants to keep their applications up to date and current with respect to all information contained therein. Since filing the most recent ownership report, there have been changes in the membership of the governing board of CMSGC. Part 1 of the amendment reports these changes. Compliance with §1.65 of the rules constitutes good cause for this portion of the amendment. Moreover the amendment will not require the addition of any issues or parties, and will not create any comparative benefit to the applicant.

3. With respect to the engineering amendment, as stated above, it is being submitted as part of a Settlement Agreement with the other competing applicant, He's Alive, Incorporated, which is also submitting an amendment to its engineering proposal increasing the null in the direction of WRCT. The two amendments when considered together will eliminate the prohibited overlap, and thus the present mutual exclusivity between the two applications, permitting both of them to be granted. Long standing Commission policy contemplates, and even encourages compromises of this sort because the public interest is better

served by the conservation of limited time and financial resources of the parties and the Commission by avoiding a hearing, and the fact that both applications can be granted and at an earlier date, which will bring increased service to the communities of Pittsburgh and Murrysville, Pennsylvania.

4. The public interest benefits to be derived from approval of such a settlement have been held to constitute good cause under the *Erwin O'Connor* criteria¹ for the approval of post-designation engineering amendments. *See, e.g., Cabrini College, et al.*, (FCC 89M-2039, Released August 78, 1989), wherein this Presiding Judge approved a four-way settlement involving breakaway engineering amendments of educational institutions.

5. Because the proposed amendments of both parties need to be accepted in order for the mutual exclusivity to be eliminated, the engineering portion of the amendment is, by necessity, *contingent* upon approval of the Settlement Agreement and the amendment offered by HAI. As stated in the Settlement Agreement being simultaneously submitted herewith, should the Joint Motion for Approval of the Settlement Agreement not be approved for any reason, each party would be free to withdraw its respective amendment and to continue to prosecute its respective application.

3. COMPLIANCE WITH §73.3525

6. The declarations and other showings required of applicants under §73.3525 of the Rules are contained as exhibits to the Joint Motion for Approval of Settlement Agreement, being filed simultaneously herewith.

7. No republication is required under §73.3525(b) in this proceeding because no party is proposing to dismiss its application. Thus, both of the communities in question will receive new broadcast service.

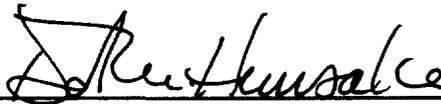
¹*Erwin O'Connor Broadcasting Co.*, 22 FCC 2d 140, 18 RR 2d 820 (Rev. Bd. 1970).

Conclusion

WHEREFORE, good cause having been shown, CMSGC respectfully urges that this Petition for Leave to Amend be GRANTED, and that the attached Amendment to the CMSGC Application be ACCEPTED.

Respectfully submitted,

**CARNEGIE-MELLON STUDENT GOVERNMENT
CORPORATION**

By: 

David M. Hunsaker

Its Attorney

Law Offices
PUTBRESE, HUNSAKER & RUDDY
6800 Fleetwood Road, Suite 100
P.O. Box 539
McLean, Virginia 22101
(703) 790-8400

September 30, 1992

Law Offices
Putbree, Hunsaker & Ruddy
6800 Fleetwood Road
McLean House, Suite 100
P.O. Box 539
McLean, Virginia 22101

Keith E. Putbree
David M. Hunsaker
Richard John Ruddy, Jr.
Cary S. Tepper *
John C. Trent

September 30, 1992

Telephone
(703) 790-8400
Telecopy
(703) 827-9538

* Maryland and D.C. Bars only

Donna R. Searcy, Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Dear Madam Secretary:

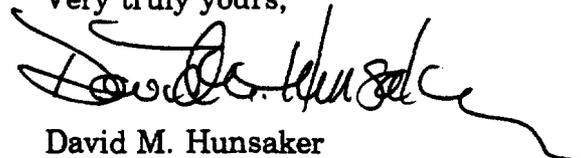
**Re: BPED-891108MA; WRCT-FM, Pittsburgh,
PA. Amendment to Application**

Submitted in triplicate herewith is an **Amendment** to the above-referenced Application of **Carnegie-Mellon Student Government Corporation** for a major change in the facilities of **WRCT-FM, Pittsburgh, Pennsylvania**.

Pursuant to Section 73.3522(b) of the Commission's Rules, an accompanying Petition for Leave to Amend is being filed in MM Docket No. 92-132, and upon all parties thereto.

Should there be any questions concerning this matter, please contact this Office.

Very truly yours,


David M. Hunsaker

DMH:cf

cc: Hon. John M. Frysiak
Lee J. Peltzman, Esquire
James Shook, Esquire
WRCT-FM Public Inspection File

**Carnegie-Mellon Student Government Corporation
Radio Station WRCT-FM
Carnegie-Mellon University
5020 Forbes Avenue
Pittsburgh, PA 15213**

Federal Communications Commission
Washington, D.C.

Gentlemen:

Re: BPED-891108MA

The Application of Carnegie-Mellon Student Government Corporation, for a Construction Permit to make changes in the facilities of noncommercial, educational station WRCT-FM, Pittsburgh, Pennsylvania, is hereby **Amended** to include the attached information.

Very truly yours,



Todd Padezanin
General Manager and Member
Governing Board

9/24/92

Date

A M E N D M E N T

The following persons are officers and members of the Governing Board of
Carnegie-Mellon Student Government Corporation:

NAME/RESIDENCE	OFFICE	CITIZENSHIP / OCCUPATION
Michael Barros Pittsburgh, PA	President	USA Student
David McPherson Pittsburg, PA	Vice President	USA Student
Mary Jo Rudman, Pittsburgh, PA	Treasurer	USA University Administrator
Anne Witchener Pittsburgh, PA	Board Member	USA University Administrator
Bonnie Gorman Pittsburgh, PA	Board Member	USA University Administrator
Todd Padezanin Pittsburgh, PA	Board Member & General Mgr, WRCT	USA Student

ENGINEERING EXHIBIT

**AMENDMENT TO APPLICATION FOR
CONSTRUCTION PERMIT TO MODIFY FACILITIES**

**CARNEGIE-MELLON STUDENT GOVERNMENT CORP.
WRCT(FM), PITTSBURGH, PENNSYLVANIA**

Ch 202A (88.3 MHz) 1.77 KW ERP 22 m HAAT

September 1992

ENGINEERING STATEMENT

This Engineering Statement and the attached figures have been prepared on behalf of Carnegie-Mellon Student Government Corporation, licensee of Non-Commercial Educational FM station WRCT in Pittsburgh, Pennsylvania, by B. Benjamin Evans of Evans Associates, Consulting Communications Engineers in Thiensville, Wisconsin. Carnegie-Mellon has an application pending to increase the facilities of WRCT (FCC File No. BPED-891108MA). This application is mutually-exclusive with a pending application filed by He's Alive, Inc. for a new NCE-FM station to operate on Channel 201A at Murrysville, Pennsylvania (File No. BPED-900606MC). The instant amendment application by Carnegie-Mellon is submitted pursuant to a proposed settlement agreement between Carnegie-Mellon and He's Alive, in which each party would modify their own technical proposal so that the mutual exclusivity is dissolved. He's Alive is simultaneously submitting an amendment to modify its proposed facility.

PRELIMINARY

The pending application to modify the facilities of WRCT proposes to increase the ERP to 1.50 kilowatts. It is proposed herein to change to a directional antenna in order to protect the new Murrysville facility as modified in He's Alive's concurrent amendment. WRCT will operate with an effective radiated power of 1.77 kilowatts in the direction of maximum antenna field strength.

In addition, this amendment makes a correction in the antenna height above average terrain, which is currently listed as 16 meters. Using the antenna height above mean sea level, and computing the average terrain heights above mean sea level of the eight equally-spaced radials from the NGDC 30-second terrain database, the HAAT is determined to be 22 meters. This affiant believes that this is a more accurate representation of the antenna HAAT than was determined in the original FCC Form 340 application for construction permit, which was filed in 1979. The antenna height above mean sea level, however, will not be altered under this amendment.

PROPOSED FACILITIES

The present WRCT antenna will be replaced by a directional antenna with an equal number of bays. This antenna is described fully in attached Figure 2. The antenna-supporting tower height will not be increased. A new one kilowatt transmitter will be installed and will operate at about 1.0 kilowatt.

Engineering Statement
WRCT(FM), Pittsburgh, PA
Page 2

The proposed WRCT facility, as amended herein, will serve an area of 473 square kilometers and a population of 794,729 persons with a predicted 1.0 mv/m signal or better. The population was calculated on the basis of the 1990 U.S. Census figures.

ALLOCATIONS

An allocation study conducted by this affiant has determined that WRCT may operate at 1.77 kilowatts maximum ERP on Channel 202 without causing predicted interference to primary FM facilities, either authorized or proposed. Figure 3 is an allocation study which shows that the instant proposal will not cause prohibited overlap of predicted contours with the proposed Murrysville facility as concurrently amended. There are no commercial FM facilities spaced 53 or 54 channels from WRCT to which IF interference would be caused.

The WRCT transmitter site is within 320 kilometers of the common border between the United States and Canada. This proposal is deemed in compliance with all pertinent agreements and treaties with Canada in matters of FM allocations.

TV CHANNEL 6 INTERFERENCE

The instant proposal complies with Section 73.525 of the FCC Rules, which protects the reception of TV Channel 6 stations from undue interference caused by non-commercial educational FM stations. The Channel 6 facility that is closest to WRCT is WJAC-TV in Johnstown, Pennsylvania.

The predicted interference within the WJAC-TV Grade B contour is shown in attached Figure 4-A, and an explanation of how the TV Channel 6 interference study was conducted is presented in Figure 4-C.

The predicted interference area is totally within the city grade contour of TV station WPXI in Pittsburgh, which is an affiliate of the same network as WJAC-TV, and completely outside the Grade A contour of WJAC-TV. Furthermore, no part of the predicted interference area is located in the same ADI market as WJAC-TV. Therefore, the proposed modification is in compliance with Section 73.525 of the FCC Rules. Details are given in Figure 4-C.

Engineering Statement
WRCT(FM), Pittsburgh, PA
Page 3

BLANKETING

The distance to the proposed blanketing contour, as determined according to Section 73.318 of the FCC Rules, is 0.52 kilometer. The applicant will satisfy all complaints of blanketing interference which are received by the station during a one-year period.

INTERFERENCE CONSIDERATIONS

No interference due to spurious or harmonic emissions or to cross modulation is expected to be caused to any of the other FM or TV facilities within 10 kilometers of WRCT. If, in spite of expectations, difficulties of this sort do occur, the applicant will cooperate fully in their resolution. The FM and TV broadcast facilities that are within 10 kilometers of WRCT include:

WQED-FM	WDUQ(FM)	WYEP-FM	WLTJ(FM)	WBZZ(FM)	WWSW-FM
WVTY(FM)	WPTS-FM	WSHH(FM)	WDVE(FM)	WAMO-FM	WDSY(FM)
KDKA-TV	WPXI(TV)	WQED(TV)	WQEX(TV)	WPGH-TV	

RADIO FREQUENCY RADIATION EXPOSURE

The instant proposal has been reviewed in accordance with OST Bulletin No. 65 entitled "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation." The WRCT antenna is mounted on a 40-foot tower which is on the roof of a seven-story office building.

Figure 2-C, Page 2, attached, is a tabulation of relative field antenna radiations for vertical angles between +9 and -90 degrees relative to the horizontal plane. As can be seen, the maximum relative field in the downward direction occurs at -63 and -64 degrees, where the field is 0.30. The shortest distance from any point two meters above the roof to the center of radiation is 5.3 meters. Using the method of calculating the power density described in the bulletin, the worst-case power density due to the proposed WRCT power level would be 0.379 mW/cm², or 37.9% of the ANSI-recommended exposure level. There are no other buildings in the immediate area which extend into or above the aperture of the antenna. The doors to the roof of the building are locked at all times. Therefore, the instant proposal would not be a radiation hazard to either the general public or to office personnel.

Engineering Statement
WRCT(FM), Pittsburgh, PA
Page 4

If workers employed or contracted by the station are required to climb the tower, the transmitter power will be reduced or turned off completely in order to comply with RF exposure standards. Therefore, the proposed facility would not be an RF radiation hazard to workers.

ENVIRONMENTAL ASSESSMENT

Since no changes are proposed to the existing antenna-supporting tower, and in view of the above, this proposal does not constitute a major environmental action.

ATTACHED FIGURES

Affidavit

FCC Form 340, Section V-B

Figure 1 - - - - - Map Showing Present & Proposed 1 mv/m Contours

Figure 2 - - - - - Directional Antenna Data

Figure 3 - - - - - Contour Protection Study - New FM on Ch. 201A at Murrysville, PA

Figure 4 - - - - - TV Channel 6 Interference Study

AFFIDAVIT

COUNTY OF OZAUKEE }
STATE OF WISCONSIN } SS:

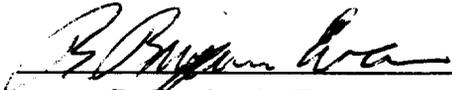
B. BENJAMIN EVANS, being duly sworn upon oath deposes and says:

That his qualifications are a matter of record with the Federal Communications Commission;

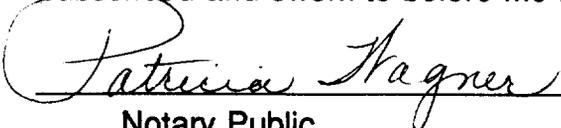
That he is a Consulting TeleCommunications Engineer in Wisconsin, and is a partner in the firm of Evans Associates;

That this firm has been retained by Carnegie-Mellon Student Government Corporation to prepare this engineering exhibit;

That he has either prepared or directly supervised the preparation of all technical information contained in this engineering statement, and that the facts stated in this engineering statement are true of his knowledge, except as to such statements as are herein stated to be on information and belief and as to such statements he believes them to be true.


B. Benjamin Evans

Subscribed and sworn to before me this 22nd day of September, 1992.


Notary Public My Commission expires May 15, 1994.

Section V-B - FM BROADCAST ENGINEERING DATA	FOR COMMISSION USE ONLY File No. _____ ASB Referral Date _____ Referred by _____
--	--

Name of Applicant

CARNEGIE-MELLON STUDENT GOVERNMENT CORPORATION

Call letters *(if issued)*

WRCT

Is this application being filed in response to a window? Yes No

If Yes, specify closing date: _____

Purpose of Application: *(check appropriate boxes!)*

- | | |
|--|---|
| <input type="checkbox"/> Construct a new (main) facility | <input type="checkbox"/> Construct a new auxiliary facility |
| <input type="checkbox"/> Modify existing construction permit for main facility | <input type="checkbox"/> Modify existing construction permit for auxiliary facility |
| <input checked="" type="checkbox"/> Modify licensed main facility | <input type="checkbox"/> Modify licensed auxiliary facility |

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

- | | |
|--|---|
| <input type="checkbox"/> Antenna supporting-structure height | <input checked="" type="checkbox"/> Effective radiated power |
| <input checked="" type="checkbox"/> Antenna height above average terrain
Correction of HAAT | <input type="checkbox"/> Frequency |
| <input type="checkbox"/> Antenna location | <input type="checkbox"/> Class |
| <input type="checkbox"/> Main Studio location | <input checked="" type="checkbox"/> Other <i>(Summarize briefly)</i>
Change to directional antenna and amend pending application (BPED-891108MA) |

File Number(s) _____

1. Allocation:

Channel No.	Principal community to be served:			Class <i>(check only one box below)</i>							
	City	County	State	<input checked="" type="checkbox"/> A	<input type="checkbox"/> B1	<input type="checkbox"/> B	<input type="checkbox"/> C3	<input type="checkbox"/> C2	<input type="checkbox"/> C1	<input type="checkbox"/> C	<input type="checkbox"/> D
202	Pittsburgh	Allegheny	PA								

2. Exact location of antenna.

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.
 5000 Forbes Avenue, City of Pittsburgh, Allegheny County, Pennsylvania

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude or East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed.

Latitude	40 °	26 '	39 "	Longitude	79 °	56 '	37 "
----------	------	------	------	-----------	------	------	------

3. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? Yes No

If Yes, give call letter(s) or file number(s) or both. _____

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

N/A

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 2)

4. Does the application propose to correct previous site coordinates? Yes No
 If Yes, list old coordinates.

Latitude ° ' "	Longitude ° ' "
---	--

5. Has the FAA been notified of the proposed construction? Yes No
 If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available. **Alteration of the existing antenna structure is not proposed.**

Exhibit No.

Date _____ Office where filed _____

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

Landing Area	Distance (km)	Bearing (degrees True)
(a) _____	N/A	_____
(b) _____	_____	_____

7. (a) Elevation: *(to the nearest meter)*

(1) of site above mean sea level; 288.6 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 40.5 meters

(3) of the top of supporting structure above mean sea level [(aX1) + (aX2)] 329.2 meters

(b) Height of radiation center: *(to the nearest meter)* H = Horizontal; V = Vertical

(1) above ground 35.7 meters (H)

35.7 meters (V)

(2) above mean sea level [(aX1) + (bX1)] 324.3 meters (H)

324.3 meters (V)

(3) above average terrain 21.9 meters (H)

21.9 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(bX3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No. On File

9. Effective Radiated Power:

(a) ERP in the horizontal plane 1.77 kw (H*) 1.77 kw (V*)

(b) Is beam tilt proposed? Yes No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No.

_____ kw (H*) _____ kw (V*)

*Polarization

10. Is a directional antenna proposed?

Yes No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of horizontally and vertically polarized radiated components in terms of relative field.

Exhibit No.
Eng. Fig 2

11. Will the main studio be located within the 70 dBu or 3.16 mV/m contour?

Yes No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.

12. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast (except citizens band or amateur) radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

Yes No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. (See 47 C.F.R. Sections 73.315(b), 73.316(d) and 73.318.)

Exhibit No.
Eng. Stmt.

13. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.
On File

14. Attach as an Exhibit (name the source) a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
Eng. Fig 1

- (a) the proposed transmitter location, and the radials along with profile graphs have been prepared;
- (b) the 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mV/m contour; and
- (c) the legal boundaries of the principal community to be served.

15. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 473 sq. km. Population 794,729 (1990 U.S. Census)

16. Attach as an Exhibit a map (Sectional Aeronautical charts where obtainable) showing the present and proposed 1 mV/m (60 dbu) contours.

Exhibit No.
Eng. Fig 1

Enter the following from Exhibit above: Gain Area 346.9 sq km ~~XXXX~~
Loss Area 0.0 ~~XXXX~~

Percent change (gain area plus loss area as percentage of present area) 276 %.
If 50% or more this constitutes a major change. Indicate in question 2(c), Section I, accordingly.

Exhibit No.
N/A

17. For an application involving an auxiliary facility only, attach as an Exhibit a map (Sectional Aeronautical Chart or equivalent) that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675. (File No.: _____)

18. Terrain and coverage data (to be calculated in accordance with 47 C.F.R. Section 73.3131).

Source of terrain data: (check only one box below)

Linearly interpolated 30-second database 7.5 minute topographic map

(Source: National Geophysical Data Center)

Other (briefly summarize)

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km		Predicted Distances to the 1 mV/m contour (kilometers)
	ERP(kw)	(meters)	
0	1.77	15.8	11.72
45	0.77	59.4	13.26
90	0.68	-3.5	9.21
135	1.37	55.3	14.76
180	1.77	10.8	11.72
225	1.77	-8.8	11.72
270	1.77	41.4	13.59
315	1.77	4.7	11.72

Allocation Studies

(See Subpart E of 47 C.F.R. Part 73)

19. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?

Yes No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

Exhibit No.

20. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada?

Yes No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947.

Exhibit No.
On File

21. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following:

Exhibit No.
Eng. Fig 3

- (a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
- (b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
- (c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
- (d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
- (e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
- (f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
- (g) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (h) The name of the map(s) used in the Exhibit(s).

22. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as an Exhibit information required in 1/ *(separation requirements involving intermediate frequency (i.f.) interference)*.

Exhibit No.

None pertinent

23.(a) Is the proposed operation on Channel 218, 219, or 220?

Yes No

(b) If the answer to (a) is yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207?

Yes No

(c) If the answer to (b) is yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223.

Exhibit No.

(d) If the answer to (b) is no, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.

1/ A showing that the proposed operation meets the minimum distance separation requirements. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 6)

(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.
N/A

- (1) Protected and interfering contours, in all directions (360), for the proposed operation.
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibits(s).

24. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525?

Yes No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.
EngFig 4

25. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)?

Yes No

If Yes, attach as an Exhibit information required in 1/. (Except for Class D (secondary) proposals.)

Exhibit No.

26. Environmental Statement (See 47 C.F.R. Section 1.1301 et seq.)

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact?

Yes No

If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.

Exhibit No.

If No, explain briefly why not. See Engineering Statement

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed) B. Benjamin Evans	Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer
Signature 	Address (Include ZIP Code) 216 N. Green Bay Road Thiensville, WI 53092
Date September 22, 1992	Telephone No. (Include Area Code) (414) 242-6000

FIGURE 1

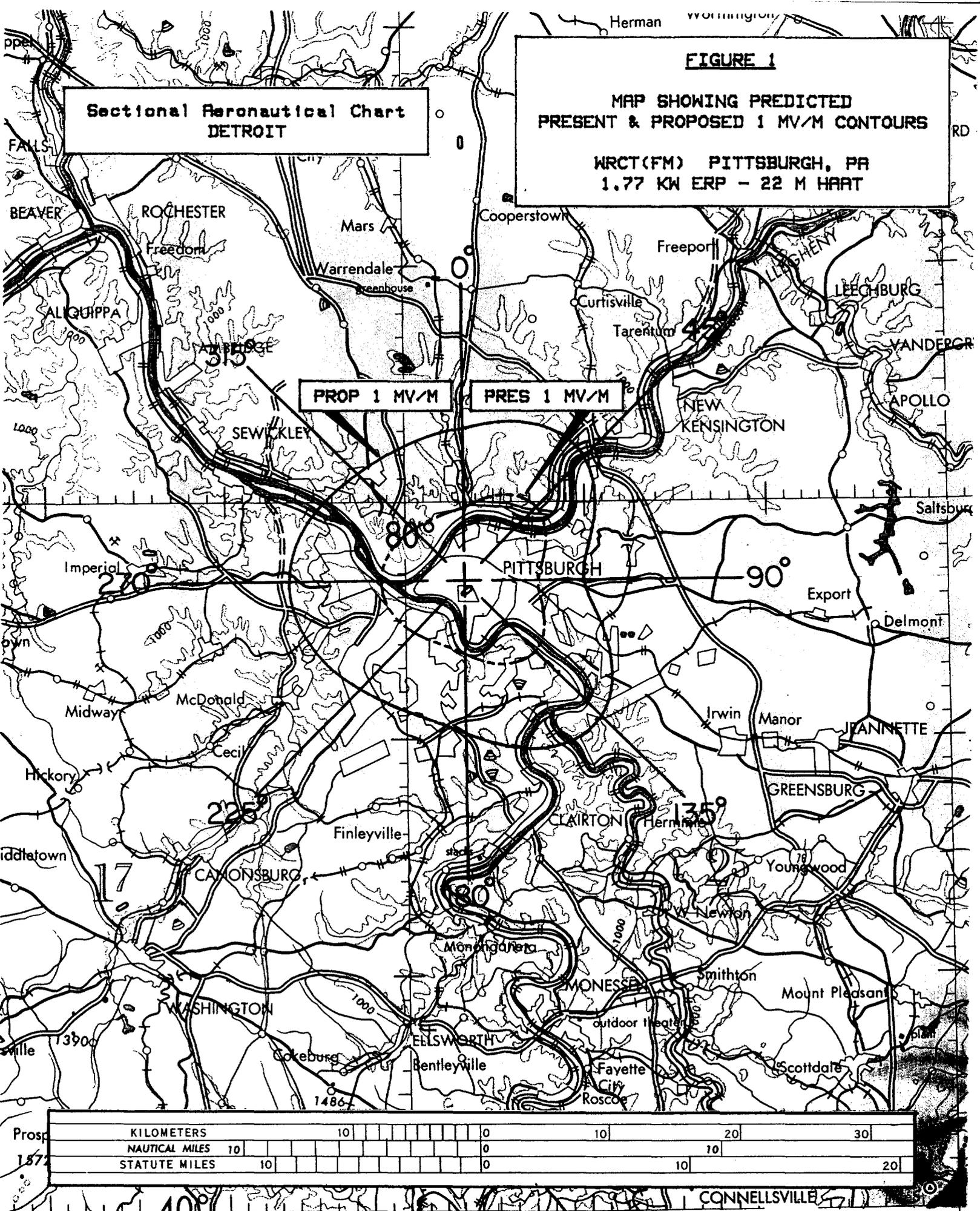
**MAP SHOWING PREDICTED
PRESENT & PROPOSED 1 MV/M CONTOURS**

**WRCT(FM) PITTSBURGH, PA
1.77 KW ERP - 22 M HAAT**

**Sectional Aeronautical Chart
DETROIT**

PROP 1 MV/M

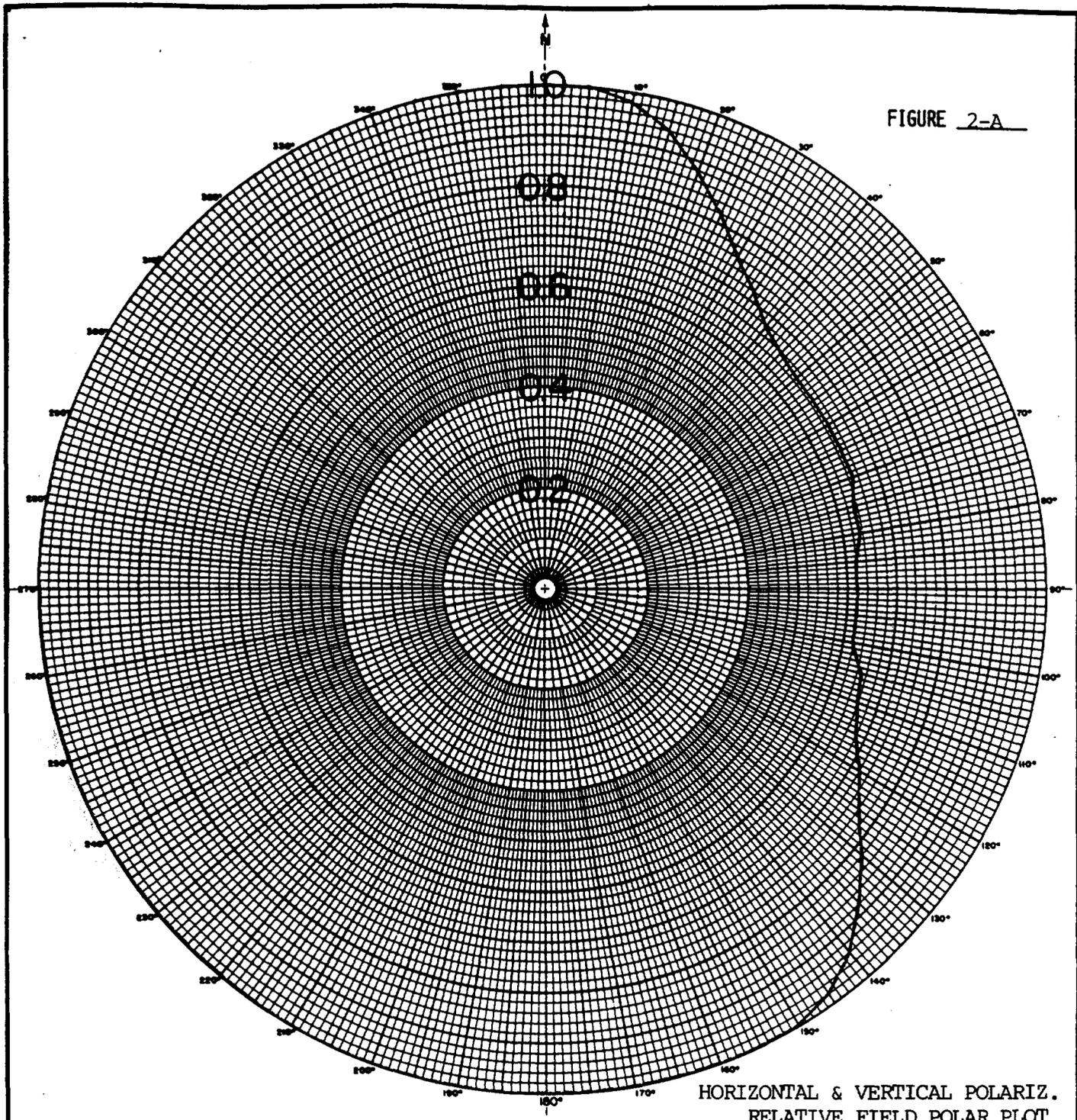
PRES 1 MV/M



Prop	KILOMETERS		10	0	10	20	30
1572	NAUTICAL MILES		10	0	10	20	
	STATUTE MILES		10	0	10	20	

40° 80° CONNELLVILLE 30

FIGURE 2-A



HORIZONTAL & VERTICAL POLARIZ.
RELATIVE FIELD POLAR PLOT

X CALCULATED MEASURED HORIZONTAL RADIATION PATTERN ND X DA

CUSTOM ANTENNA

APPLICANT :	WRCT
LOCATION :	Pittsburgh, PA
FREQUENCY :	88.3 MHz
POWER :	1.77 KW Max ERP
LATITUDE :	40 ^{DEG.} 26 ^{MIN.} 39 ^{SEC.}
LONGITUDE :	79 ^{DEG.} 56 ^{MIN.} 37 ^{SEC.}
VERTICAL ANGLE:	0°
R.M.S. FIELD:	0.9086
DATE :	SEPTEMBER 1992

RALPH E. EVANS ASSOCIATES
 Consulting Communications Engineers
 216 North Green Bay Road, Suite 208
 Thiensville, Wisconsin 53092

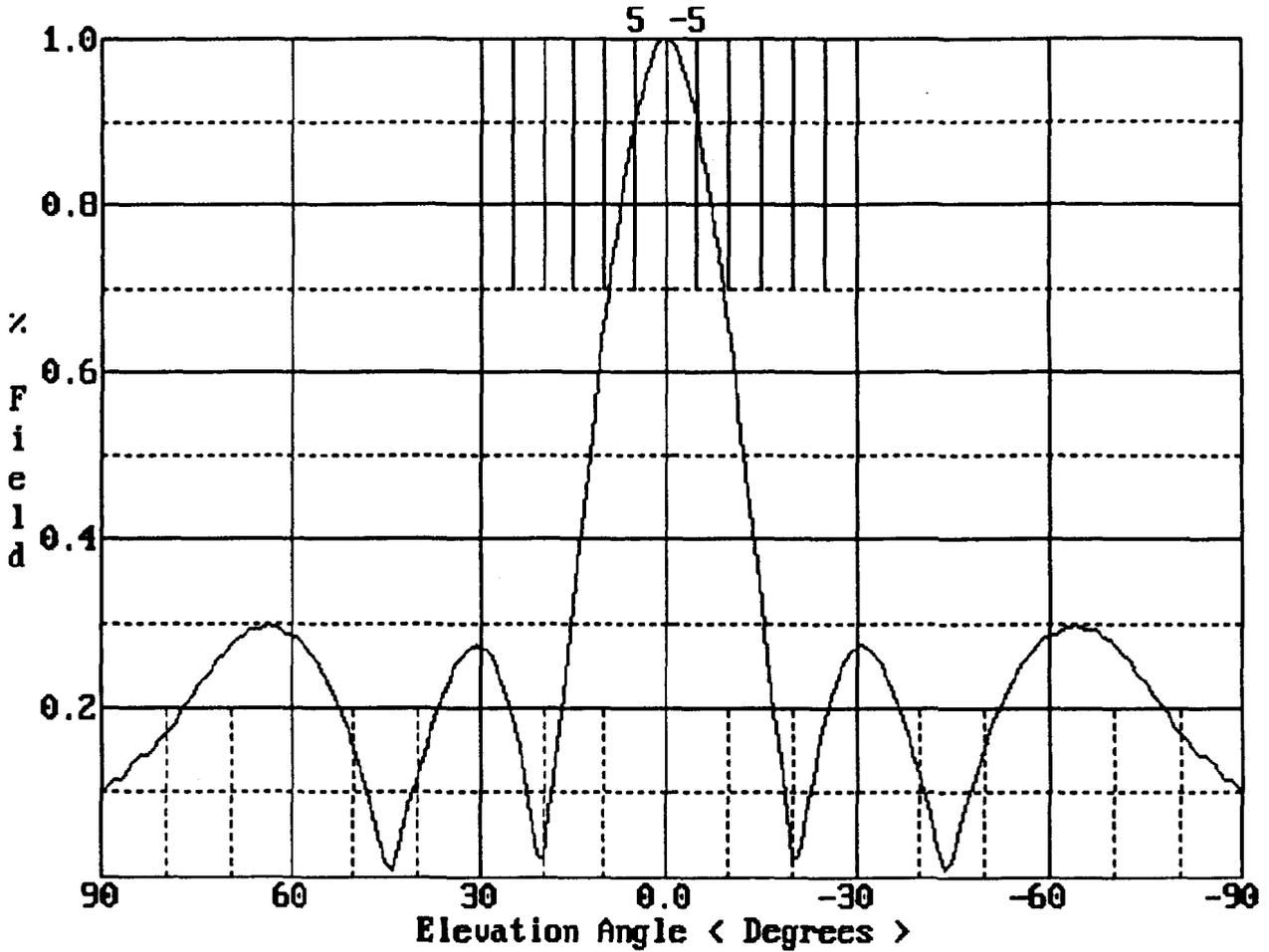
TABULATION OF HORIZONTAL PLANE RADIATIONS

Radio Station WRCT
Pittsburgh, Pennsylvania

Azimuth (deg T)	Relative Field	Power (KW)	Power (dBk)	Azimuth (deg T)	Relative Field	Power (KW)	Power (dBk)
0.0	1.000	1.770	+2.48	180.0	1.000	1.770	+2.48
5.0	1.000	1.770	+2.48	185.0	1.000	1.770	+2.48
10.0	0.980	1.700	+2.30	190.0	1.000	1.770	+2.48
15.0	0.940	1.564	+1.94	195.0	1.000	1.770	+2.48
20.0	0.880	1.371	+1.37	200.0	1.000	1.770	+2.48
25.0	0.820	1.190	+0.76	205.0	1.000	1.770	+2.48
30.0	0.760	1.022	+0.10	210.0	1.000	1.770	+2.48
35.0	0.720	0.918	-0.37	215.0	1.000	1.770	+2.48
40.0	0.680	0.818	-0.87	220.0	1.000	1.770	+2.48
45.0	0.660	0.771	-1.13	225.0	1.000	1.770	+2.48
50.0	0.650	0.748	-1.26	230.0	1.000	1.770	+2.48
55.0	0.650	0.748	-1.26	235.0	1.000	1.770	+2.48
60.0	0.650	0.748	-1.26	240.0	1.000	1.770	+2.48
65.0	0.650	0.748	-1.26	245.0	1.000	1.770	+2.48
70.0	0.650	0.748	-1.26	250.0	1.000	1.770	+2.48
75.0	0.635	0.714	-1.46	255.0	1.000	1.770	+2.48
80.0	0.635	0.714	-1.46	260.0	1.000	1.770	+2.48
85.0	0.620	0.680	-1.67	265.0	1.000	1.770	+2.48
90.0	0.620	0.680	-1.67	270.0	1.000	1.770	+2.48
95.0	0.620	0.680	-1.67	275.0	1.000	1.770	+2.48
100.0	0.620	0.680	-1.67	280.0	1.000	1.770	+2.48
105.0	0.650	0.748	-1.26	285.0	1.000	1.770	+2.48
110.0	0.660	0.771	-1.13	290.0	1.000	1.770	+2.48
115.0	0.680	0.818	-0.87	295.0	1.000	1.770	+2.48
120.0	0.720	0.918	-0.37	300.0	1.000	1.770	+2.48
125.0	0.760	1.022	+0.10	305.0	1.000	1.770	+2.48
130.0	0.820	1.190	+0.76	310.0	1.000	1.770	+2.48
135.0	0.880	1.371	+1.37	315.0	1.000	1.770	+2.48
140.0	0.940	1.564	+1.94	320.0	1.000	1.770	+2.48
145.0	0.980	1.700	+2.30	325.0	1.000	1.770	+2.48
150.0	1.000	1.770	+2.48	330.0	1.000	1.770	+2.48
155.0	1.000	1.770	+2.48	335.0	1.000	1.770	+2.48
160.0	1.000	1.770	+2.48	340.0	1.000	1.770	+2.48
165.0	1.000	1.770	+2.48	345.0	1.000	1.770	+2.48
170.0	1.000	1.770	+2.48	350.0	1.000	1.770	+2.48
175.0	1.000	1.770	+2.48	355.0	1.000	1.770	+2.48



ELEVATION PATTERN



J*AM*P*RO ANTENNAS

Station: WRCT date:

Frequency: 88.3 MHz Type: Bays: 3 Spacing: 1.0 wave

Beam tilt: 0 Null fill: 0 %

Notes: Elevation pattern plotted in relative field



TABLE OF FIELD STRENGTH FOR : Z3

INCREMENTAL DEGREES

	0	1	2	3	4	5	6	7	8	9
+	1.00	1.00	.99	.96	.93	.90	.86	.81	.77	.71
-	1.00	1.00	.99	.96	.93	.90	.86	.81	.77	.71
D -10	.66	.59	.52	.46	.39	.33	.26	.20	.14	.08
E -20	.02	.03	.07	.12	.15	.19	.22	.24	.26	.27
G -30	.27	.28	.27	.26	.25	.23	.22	.20	.17	.15
R -40	.12	.09	.07	.04	.01	.02	.05	.07	.10	.13
E -50	.15	.17	.19	.21	.23	.24	.26	.26	.28	.28
E -60	.29	.29	.29	.30	.30	.29	.29	.29	.28	.28
S -70	.28	.26	.26	.24	.24	.23	.21	.21	.20	.18
-80	.17	.16	.15	.14	.14	.14	.13	.12	.12	.11
-90	.10									

Station: WRCT date: _____

Frequency: 88.3 MHz Type: _____ Bays: 3 Spacing: 1.0 wave

Beam tilt: 0 Null fill: 0 %

Notes: Elevation pattern plotted in relative field

DESCRIPTION OF PROPOSED ANTENNA SYSTEM

WRCT(FM)
PITTSBURGH, PENNSYLVANIA

It is proposed to employ a custom 3-bay full-wavelength spaced directional antenna to be side-mounted on an existing tower.

Both horizontal and vertical polarizations will be utilized. Horizontal and/or vertical parasitic elements will be installed, as appropriate, so that the composite (horizontal and vertical polarizations) pattern will be as close as possible to the pattern envelope shown in attached Figure 2-A.

Neither the horizontal nor the vertical radiation component of the pattern in Figure 2-A changes more than 2 dB per 10 degrees of azimuth, nor does either component exceed a maximum-to-minimum radiation ratio of 15 dB.

The antenna will be mounted on the tower in accordance with specific instructions provided by the manufacturer. The antenna will not be mounted on the same tower level as any other antenna, nor will it be mounted within the minimum horizontal or vertical distance to any other antenna which is specified by the antenna manufacturer as being necessary for proper directional operation.