Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In re Applications of	)	MM Docket No. 93-37
LEHIGH VALLEY COMMUNITY BROADCASTERS ASSOCIATION, INC. Allentown, Pennsylvania	)	FCC File No. BPED-891019MF
BEACON BROADCASTING CORPORATION Allentown, Pennsylvania	)	FCC File No. BPED-900905ML
NORTHAMPTON COMMUNITY COLLEGE Bethlehem Township, Pennsylvania	)	FCC File No. BPED-900202MC
For Construction Permit for a New Noncommercial, Educational FM Station	)	

To: Administrative Law Judge
Joseph Chachkin

PETITION FOR LEAVE TO AMEND AND AMENDMENT

Lehigh Valley Community Broadcasters Association, Inc. ("Lehigh"), through its attorneys and pursuant to Section 73.3522(b) of the rules, hereby submits its Petition for Leave to Amend and Amendment in the above-referenced proceeding. Lehigh seeks leave to amend its application to change its proposed technical facilities by specifying operation on Channel 201 in lieu of Channel 207 and changing antenna supporting structure height, antenna height above average terrain and effective radiated power.

Good cause is shown for acceptance of Lehigh's amendment as it would eliminate mutual exclusivity with the application of Beacon Broadcasting Corporation ("Beacon") and allow a grant of both the Lehigh application, as amended, and the

Beacon application.[1/] Further, the grant of these applications will result in resolution of the instant proceeding, conserve the resources of the Commission and these noncommercial educational applicants and expedite the provision of two new noncommercial educational services to the public.

The Commission has accepted several similar amendments under similar circumstances. See Cabrini College, FCC 89M-2039, released August 8, 1989; Yolo County Public Radio, FCC 90M-577, released March 9, 1990; Lakeshore Communications, Inc., FCC 91-1428, released April 24, 1991; WSKG Public Telecommunications Council, FCC 93M-14, released January 13, 1993; See also Faith Bible College, FCC 92M-872, released August 13, 1992. Accordingly, the public interest would be well served by acceptance of Lehigh's amendment.

1/ On April 14, 1993, Lehigh and Beacon filed a Joint Motion for Approval of Settlement Agreement, grant of which is contingent upon acceptance of the instant amendment.

WHEREFORE, Lehigh respectfully requests that the Presiding Officer accept the instant amendment and grant the Joint Motion for Approval of Settlement Agreement, filed April 14, 1993. An original and two copies of the amendment are attached to the original copy of this Petition.

Respectfully submitted,

LEHIGH VALLEY COMMUNITY
BROADCASTERS ASSOCIATION, INC.

By: Malcolm G. Stevenson
Malcolm G. Stevenson

Schwartz, Woods & Miller
Suite 300
1350 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202)833-1700

Its Attorneys

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LVCBA Lehigh Valley Community Broadcasters Association, Inc.
P.O. Box 1456 / Allentown, PA 18105

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

Re: New Noncommercial Educational Radio Station
Allentown, Pennsylvania
FCC File No. BPED-891019MF

Dear Ms. Searcy;

Please amend the above-referenced application in accordance with the attached materials.

Respectfully submitted,

LEHIGH VALLEY COMMUNITY
BROADCASTERS ASSOCIATION, INC.

Charles James

CHARLES JAMES
President

Date: April 13, 1993

LEHIGH VALLEY COMMUNITY BROADCASTERS

ALLENTOWN, PA

AMENDMENT TO APPLICATION

BPED-891019MF

FOR A NEW

NON-COMMERCIAL EDUCATIONAL FM BROADCAST STATION

AT ALLENTOWN, PA

CHARLES W. LOUGHERY
741 CYBUS WAY
SOUTHAMPTON, PENNSYLVANIA 18966

Federal Communications Commission
Washington, D. C. 20554

FCC 340

Approved by OMB
3060-0034
Expires 4/30/92
See Page 23 for information regarding public burden estimate

APPLICATION FOR CONSTRUCTION PERMIT FOR NONCOMMERCIAL EDUCATIONAL BROADCAST STATION

(Carefully read instructions before filing form) *Return only form to FCC*

For Commission Use Only
File No.

Section I - GENERAL INFORMATION

1. Name of Applicant		
Lehigh Valley Community Broadcasters Association, Inc.		
Street Address or P.O. Box: P.O. Box 1456		
City: Allentown	State: PA	ZIP Code: 18105
Telephone No. *(Include Area Code)*: (215) 821-9188		

Send notices and communications to the following person at the address below:		
Name: Charles James		
Street Address or P.O. Box: P.O. Box 1456		
City: Allentown	State: PA	ZIP Code: 18105
Telephone No. *(Include Area Code)*: (215) 439-7802		

2. This application is for: ☐ AM ☒ FM ☐ TV

(a) Channel No. or Frequency	(b) Principal Community	City	State
201A 88.1 MHz		Allentown	PA

(c) Check one of the following boxes:

☐ Application for **NEW** station

☐ **MAJOR** change in licensed facilities; call sign: .....

☐ **MINOR** change in licensed facilities; call sign: .....

☐ **MAJOR** modification of construction permit; call sign: .....

File No. of construction permit: .....

☐ **MINOR** modification of construction permit; call sign: .....

File No. of construction permit: .....

☒ **AMENDMENT** to pending application; application file number: BPED-891019MF

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. *Is this application mutually exclusive with a renewal application?* ☐ Yes ☒ No

If Yes, state:	Call letters	Community of License	
		City	State

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

Name of Applicant

Lehigh Valley Community Broadcasters Association, Inc.

Call letters *(if issued)*	Is this application being filed in response to a window? ☐ Yes ☒ No
to be assigned	If Yes, specify closing date: _____

Purpose of Application: *(check appropriate box(es))* AMEND PENDING APPLICATION

- ☐ Construct a new (main) facility
- ☐ Construct a new auxiliary facility
- ☐ Modify existing construction permit for main facility
- ☐ Modify existing construction permit for auxiliary facility
- ☐ Modify licensed main facility
- ☐ 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.

- ☒ Antenna supporting-structure height
- ☒ Effective radiated power
- ☒ Antenna height above average terrain
- ☒ Frequency
- ☐ Antenna location
- ☐ Class
- ☐ Main Studio location
- ☐ Other *(Summarize briefly)*

File Number(s) BPED-891019MF

1. Allocation:

Channel No.	Principal community to be served:		
	City	County	State
201A	Allentown	Lehigh	PA

Class *(check only one box below)*

☒ A ☐ B1 ☐ B ☐ C3
☐ C2 ☐ C1 ☐ C ☐ D

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.

South side of East Rock Rd., .6 miles east of 4th Street.
Salisbury Township, Lehigh County, PA.

(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°	33'	54"	Longitude	75°	26'	26"

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. See WFMZ(FM) BMPH-921113IB

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.

Existing structure, recently constructed

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.

Exhibit No.

Date _____ Office where filed FAA Study #90-AEA-0140-OE (New York office)

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)	Allentown Queen City	3.65	275°
(b)			

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

(1) of site above mean sea level; 283.5 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 203.6 meters

(3) of the top of supporting structure above mean sea level [(a)(1) + (a)(2)] 487.1 meters

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

(1) above ground DNA meters (H)

125.0 meters (V)

(2) above mean sea level [(a)(1) + (b)(1)] DNA meters (H)

408.5 meters (V)

(3) above average terrain DNA meters (H)

257 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(b)(3). 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. EE-1

9. Effective Radiated Power:
(a) ERP in the horizontal plane – kw (H*) 0.1 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. DNA

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

*Polarization

SECTION V-B – FM BROADCAST ENGINEERING DATA (Page 3)

10. Is a directional antenna proposed? [XX] 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. EE-1

11. Will the main studio be located within the 70 dBu or 3.16 mV/m contour? [X] 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? [X] 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. EE-1

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. EE-1

ON FILE NO CHANGE PROPOSED

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. EE-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 642 sq. km. Population 335,128

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. EE-1

Enter the following from Exhibit above:

Gain Area 279 sq. ~~xx~~KM

Loss Area 17 sq. ~~xx~~KM

Percent change (gain area plus loss area as percentage of present area) 77 %.

If 50% or more this constitutes a major change. Indicate in question 2(c), Section I, accordingly.

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:

Exhibit No. DNA

(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 73.313).*

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

☒ Linearly interpolated 30-second database ☐ 7.5 minute topographic map

(Source: Dataworld)

☐ Other *(briefly summarize)*

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1 mV/m contour (kilometers)
0	281	15.7
45	281	17.7
90	265	17.0
135	242	16.0
180	209	11.1
225	189	8.0
270	286	11.0
315	297	14.8

Allocation Studies

(See Subpart C 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. DNA

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. DNA

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. EE-1

(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. EE-1

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. DNA

(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. DNA

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. DNA

(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?

[XX] 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. EE-1

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

[ ] Yes [XX] No

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

Exhibit No. DNA

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 [X] 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 Exhibit EE-1 for RFR study

Existing tower structure

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)*	Relationship to Applicant *(e.g., Consulting Engineer)*

[redacted]

LEHIGH VALLEY COMMUNITY BROADCASTERS

APPLICANT FOR A NEW NON-COMMERCIAL FM STATION

AT ALLENTOWN, PA

AMENDMENT TO APPLICATION

BPED-891019MF

FOR CONSTRUCTION PERMIT FOR A NEW

NON-COMMERCIAL EDUCATIONAL FM BROADCAST STATION

AT ALLENTOWN, PA

EXHIBIT EE-1

CHARLES W. LOUGHERY
741 CYBUS WAY
SOUTHAMPTON, PENNSYLVANIA 18966

[redacted]

NEW NON-COMMERCIAL FM

ALLENTOWN, PA

DECLARATION

I declare, under penalty of perjury, that I have prepared the attached Engineering Exhibit for Lehigh Valley Community Broadcasters, applicant for a new non-commercial FM station at Allentown, Pennsylvania and that all the facts therein, except for facts of which the Federal Communications Commission may take official notice, are true to the best of my knowledge and belief.

I further declare that I have prepared and filed Engineering Exhibits with the Commission since 1979 and that I hold an FCC General Class Radiotelephone Operators License (since 1977).

executed on: 12 April 1993

Charles W. Loughery
741 Cybus Way
Southampton, Pennsylvania 18966
215 357-5105

LEHIGH VALLEY COMMUNITY BROADCASTERS

APPLICANT FOR A NEW

NON COMMERCIAL EDUCATIONAL FM STATION

AT ALLENTOWN, PA

ENGINEERING NARRATIVE

1. INTRODUCTION

This exhibit supports the attached amendment to application BPED-891019MF of Lehigh Valley Community Broadcasters for Construction Permit for a new non-commercial FM broadcast station on Channel 201A (88.1 MHz) at Allentown, Pennsylvania. The amendment is being filed to remove the mutual exclusivity with the application of Beacon Broadcasting (BPED-900905ML)

2. FACILITIES REQUESTED

This application proposes operation on Channel 201A with an ERP of 0.1 kilowatts Max DA with an antenna 257 meters above average terrain utilizing a six bay vertically polarized antenna. Figure 4 shows the present and proposed 60 dBu coverage area while Figure 3 is the transmitter site plan. This amendment does not propose a change in location, therefore we have included only the center portion of the site map originally submitted.

The Applicant proposes vertical polarization only with a directional antenna.

3. WAIVER REQUESTED TO PERMIT POST DESIGNATION MAJOR CHANGE

The instant application requests a change in channel from 207 to 201.

The six bay antenna and associated vertical plane radiation pattern was selected for the sole purpose of providing TV channel six protection. The antenna system was designed after meeting with the Chief Engineer of WFMZ (the tower owner) who expressed great concern for the loading of a six bay antenna and associated parasitic elements. The original application for FM Channel 207 proposed a single panel style antenna. Such an antenna six bays in number was out of the question in this case due to the loading on the tower. For this reason a standard lightweight side-mounted style of antenna is proposed. The proposed pattern was selected based upon consultation with various antenna manufacturers. The final pattern should be easily optimized within the envelope of the proposed horizontal radiation pattern with a minimum or no parasitic elements. However, as a result of the new pattern the proposed 1Mv/m service area increases by 77 percent.

As a result of the above, this is a Major Amendment. Both of these changes are necessary to resolve the mutual exclusivity and maintain compliance with 47 CFR 73.525 while at the same time proposing an antenna system which can be supported by the tower structure. The tower proposed in this amendment is a critical part of the proposal due to the availability of a very high elevation above ground. This height is necessary in conjunction with the six bay antenna because the two together provide a vertical plane radiation pattern that protects Channel six as

discussed and depicted on the profile graphs below. There are no other towers in the vicinity that are either tall enough or available for the proposed FM station due to existing antenna loading consistent with the antenna design proposed.

For the above reasons, waiver of 47 CFR 73.3573 is respect-

Clearances on channels 201 thru 204 are based on the effective field of the proposed new and all existing NCE-FM facilities and the appropriate terrain factors. Clearances on channels 254, and 255 are based on distances required by Part 73, Subpart B of the Rules.

Figure 5 shows the appropriate protected and interfering contours for the above stations. Detailed terrain 3-16 Km averaging over the pertinent arcs was employed. The power and height proposed by the applicant provides the required protection to all Licensed FM stations as required by the Commission's Rules.

5. PROTECTION OF CHANNEL 6

Using the procedures of Section 73.208(c), Distance was calculated to WPVI-TV, Channel 6 in Philadelphia, PA. No other Channel 6 stations are affected by this proposal. The distance to WPVI is:

STATION	DISTANCE	AZIMUTH
WPVI	60.28km	163.60 DEGREES

Philadelphia, PA.

In all cases the channel six service contours were studied using the F(50,50) curves and all interfering contours using the F(50,10) curves. Station facilities were based on data on file with the Commission while terrain information was determined

using the NGDC 30 second database.

The study revealed the signal strength of channel six to be between 67.2 Dbu and 62.4 Dbu in the vicinity of the proposed site. Figure 1 of 73.599 imposes a series of protection ratios for a channel 201 operation as proposed herein. The Dataworld FM/TV Ch 6 Program was used to determine the interference area with respect to the main lobe of radiation of the proposed 6 bay FM antenna. Distances to the interfering contours at angles from 0 to -12 degrees from the six bay antenna were calculated using the ERP at each 1 degree interval with the F(50/10) curves and the appropriate horizontal radiation pattern as well as HAAT for each radial studied. In cases where the distance to contour was less than 1.5 Km and therefore not covered by the F(50/50) curves the Free Space formula was used to determine these distances. All areas on the ground that fall at angles between -12 thru -90 degrees from the vertical plane pattern of the antenna are presumed to be inside the interference area. Pages 26 through 44 are profile graphs for a radial every 20 degrees starting at true north as well as the 333 degree radial. The Channel six interference area is depicted on each profile. By using a six bay antenna the amount of interference to WPVI is substantially reduced and limited to the area around the transmitter site and an area northeast of the site where the Max DA ERP of 0.1 Kw coupled with the elevation of the terrain, places this area up into the interference area. At this point it should be noted that a six bay antenna was selected precisely to provide protection from interference to WPVI as well as to keep the interference area entirely out of the City of Allentown. The use of the Vertical Plane

radiation pattern is permitted by 73.313(c)(2) which states in part, "When predicting field strengths over areas not in the plane of the maximum main lobe, use the ERP in the direction of such areas, determined by considering the appropriate vertical radiation pattern".

Figure 6a is a copy of a portion of the Allentown East USGS Quadrangle map upon which is shown the proposed transmitter site, the radials from which the above profile graphs were prepared and the interference area. Figure 6b is the same area plotted on the Census map of Counties and County subdivisions.

The proposed FM site is within the channel six grade B contour and is located in Salisbury Township. The interference area encompasses portions of Salisbury, Upper Saucon and Lower Saucon Townships, all communities of less than 50,000 persons. This being the case the following formula for vertical polarity only was used: V(0.1Kw) / 40 = .0025Kw or 2.5 watts (Max DA) of equivalent horizontal power.

The interference to WPVI is that area created by the locus of intersections of a series of TV Ch 6 field strengths from 67.2 thru 62.4 Dbu and the applicable FM Ch 201 interference contours from 73.599 figure 1, based on the equivalent horizontal power of 2.5 watts (Max DA). The Equivalent power in each direction was determined by the horizontal plane radiation pattern and then the vertical plane radiation pattern.

The resultant interference area is plotted on each of the above discussed profile graphs and that portion of the interference that occurs on the ground is plotted on figures 6a and 6b

ence that occurs on the ground is plotted on figures 6a and 6b as discussed above. The location of the interference area between the supplied radials was determined by interpolation and the topography checked every five degrees to ensure an acurate depiction of the interference area.

Three Townships are affected. Salisbury Township has a population of 13,401 persons, there are 5071 housing units in this township, an actual count of housing units using the map in Figure 6a revealed 911 units inside the interference area, at 2.4 persons per unit the total number of persons affected are 2186. Upper Saucon Township has a population of 9,775 persons, there are 3360 housing units in this township, again using Figure 6a an actual count of housing units revealed 192 units inside the interference area, at 2.62 persons per unit the total number of persons affected are 503. An actual count of housing units revealed no units inside the interference area in Lower Saucon Township. The above Census data was obtained from Census publication 1990 CH-1-40 "General Housing Characteristics Pennsylvania". Applicable copies of this data are attached on pages 45 thru 47 of this exhibit.

The total number of persons included in the interference area is 2689. (1990 Census) The Applicant is therefore in compliance with 73.525.

6. ENVIRONMENTAL CONSIDERATIONS

The proposed facilities will utilize an existing communica-

structure. The proposed operation is excluded under Section 1.1306. Using the procedures outlined in OST Bulletin #65, a non-ionizing radiation evaluation of the proposed FM station and other users on the tower was performed.

The instant proposal specifies an ERP of 0.1 Kw vertical only. The antenna will be installed at the 125 meter elevation on the tower. Appendix B, table 1, of OST #65 indicates a worst case separation of 4.1 meters, this would begin below the bottom bay of the proposed six bay antenna at the 118 meter elevation on the tower.

WFMZ-TV is proposing to utilize an ERP of 1078 Kw visual and 66.1 Kw aural with horizontal polarization only. The WFMZ-TV antenna is a high gain model with a power gain of 28X mounted at approximately 181 meters on the tower. Because of the high gain, the ERP at angles departing +/- 10 degrees from the horizon is

meter elevation on the tower. Again using appendix B, table 1, the worst case separation requirement is 4.1 meters from the antenna. This hazard distance begins at the 108.9 meter elevation on the tower.

A UHF TV Translator on channel 46 operates with an ERP of 25 Kw visual and 2.5Kw aural and an antenna at the 38.1 meter elevation on the tower. The antenna is a high gain model with a gain of 10X. Because of the high gain, the ERP at angles departing +/- 10 degrees from the horizon is attenuated a minimum of 10 dB. Appendix C, table 2, with interpolation, yields a required separation of 10 meters. This area begins at the 26 meter elevation on the tower.

The total levels of all non-ionizing radiation sources at all points on the ground are below that required for protection of employees and the general public as required by ANSI 95.1-1982. There is no hazard to any person on the ground or below the 26 meter elevation on the tower structure. A sign warning of this potential hazard exists at the base of the tower to warn workers.

An agreement exists between all of the above parties which requires the reduction or cessation of operations of any or all transmissions as necessary to protect workers on the tower.

With the above procedures in place, we believe the proposed FM operation to be in compliance with the non-ionizing radiation requirements of 47 CFR 1.1307(b).

7. BLANKETING INTERFERENCE

The area surrounding the proposed site is rural in nature,

no blanketing interference is anticipated. However, the applicant will investigate and cure any complaints reported within the blanketing area.

If interference is encountered by any other licensee as a result of a grant of this application, the applicant will work to achieve an equitable solution to the problem. The applicant will assume responsibility for resolving, at its own expense, any adverse affect to any other Commission authorized station within 200 feet of the proposed FM antenna.

8. AREA AND POPULATION

The population to be served by the proposed facilities was calculated using the 1990 United States Census assuming a uniform population distribution.

9. FAA NOTIFICATION

The FAA has not been notified of the proposed construction since the supporting structure is existing and this proposal does not increase the overall height. After meeting with a representative of WFMZ (the tower owner) we verified the tower height to be 203.6 meters above ground and 487.1 meters above mean sea level. This tower replaces an older tower that stands 150.9 meters above ground and 434.3 meters above mean sea level. The tower is the same tower used by WFMZ(FM) and TV. A review of a recently filed application by WFMZ(FM) for License to cover CP BMPH-921113IB lists the height of the tower as 203.6 meters AG and