



Comprehensive Technical Statement

In support of

Airport Investors L.P.

Long-Form Application for FM Translator

93.3 MHz, Channel 227, Facility ID # 155464

Denver, PA

Covering Short-Form Application BNPFT-20030317CCS

Includes Minor Changes

Introduction

Airport Investors, L.P. proposes the following minor changes to its short-form application BNPFT-20030317CCS for a new FM translator to serve Millbach, PA:

- Transmitter location
- Antenna height
- Frequency
- Community

The proposed location is within two spectrum-limited LPFM market grids and the 39 km extensions of two others. A detailed analysis is included showing that no LPFM proposals would be precluded by the proposal.

Data Sources

Distances were calculated using the FCC method defined in 73.208 of the Commission's Rules.

All contours shown in this report were generated using antenna center above mean sea level, NAD-27 coordinates, and the FCC online HAAT calculator, which uses 30-second terrain data.

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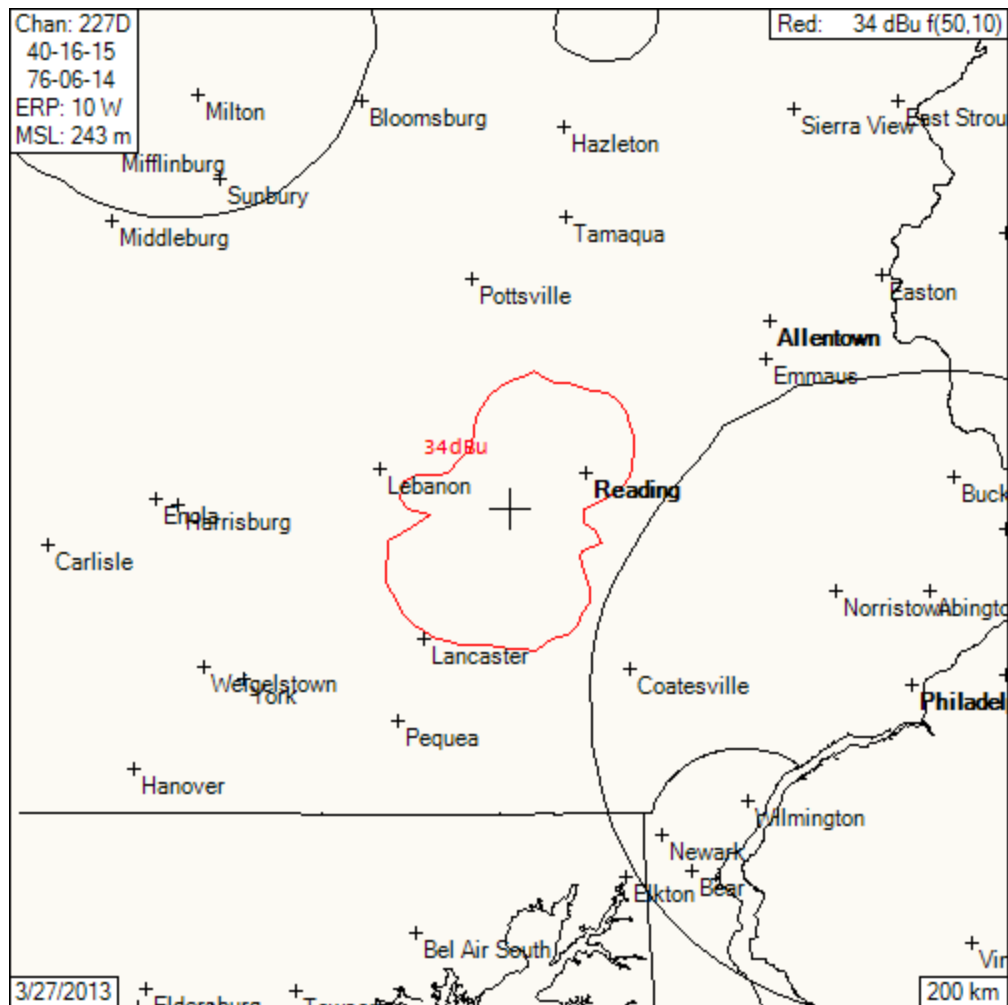
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Detailed Interference Study

The following collection of maps and the narrative accompanying each show conclusively that no prohibited overlap will occur between the proposed facility and any existing facilities or proposals.

On each map, the proposed interfering contour is shown in red and labeled as to its value. The protected contours of conflicts are shown in black. Because the area is in Zone 1, the interfering contour values are based on protection to the 54 dBu f(50,50) contour of all conflicts. The actual protected contour of each conflict is shown.

Map 1 – Co-channel Outbound Interference



There is no overlap between the proposed 34 dBu f(50,10) contour and the protected contour of any co-channel station or proposal.

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Map 2 – First Adjacent Outbound Interference



There is no overlap between the proposed 48 dBu f(50,10) contour and the protected contour of any first adjacent station or proposal.

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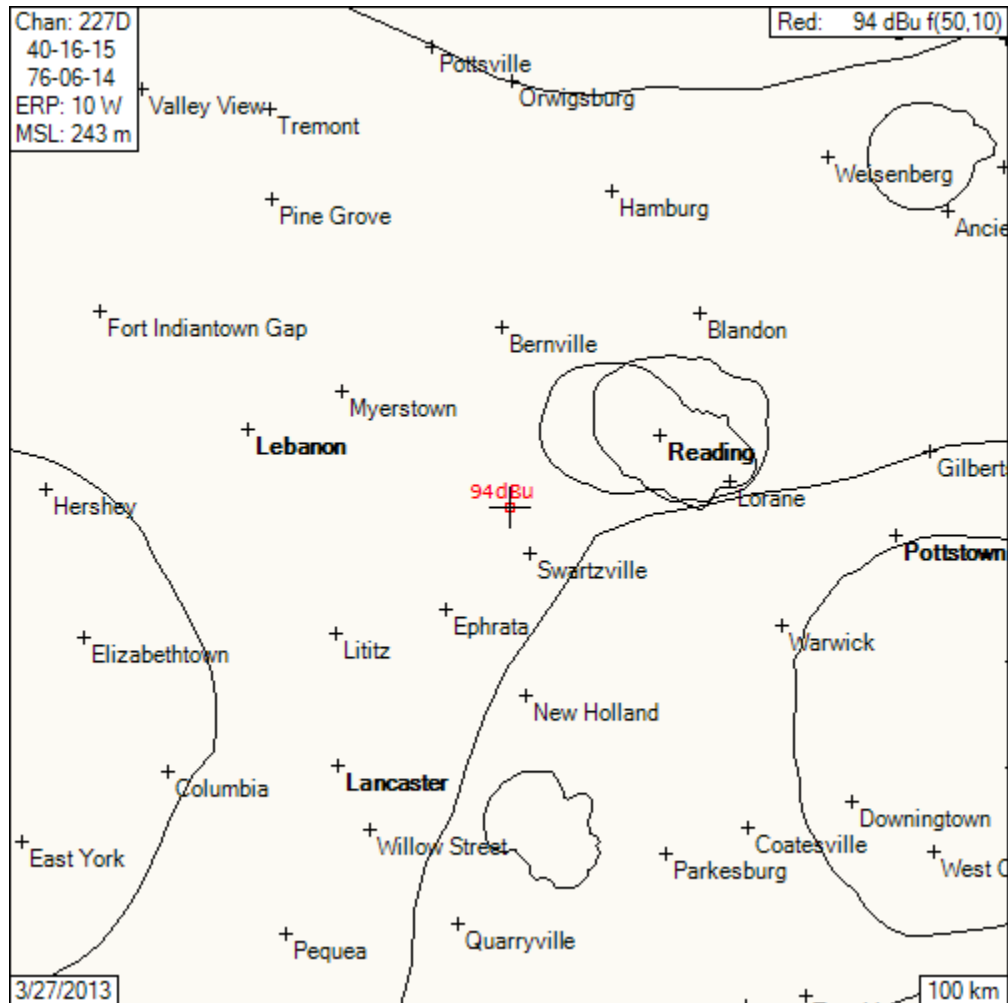
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Map 3 – Second/Third Adjacent Outbound Interference Detail



There is no overlap between the proposed 94 dBu f(50,10) contour and the protected contour of any second or third adjacent station or proposal.

IF Separation requirements

The proposed ERP is 10 W. The proposed facility is therefore exempt from IF separation requirements under §74.1204 (g).

Channel 6 Interference

The application is not for a channel that is implicated in channel 6 interference.

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International

The FM Agreements with Canada and Mexico require evaluation and potential coordination of any proposal within 320 km of the border.

The distance to the nearest point along the US/Canada border is 369 km. Coordination with Canada is not required.

The distance to the nearest point along the US/Mexico border is 2,510 km. Coordination with Mexico is not required.

Quiet Zones

The proposed site is outside the National Radio Quiet Zone (National Radio Astronomy Observatory Notification Area) in West Virginia.

The proposed site is outside the Arecibo Observatory notification area in Puerto Rico.

The proposed site is not within a 100 km extension of the Table Mountain Radio Receiving Zone in Colorado.

Protected Monitoring Stations

The nearest Protected Monitoring Station is 137 km distant, in Laurel, MD.

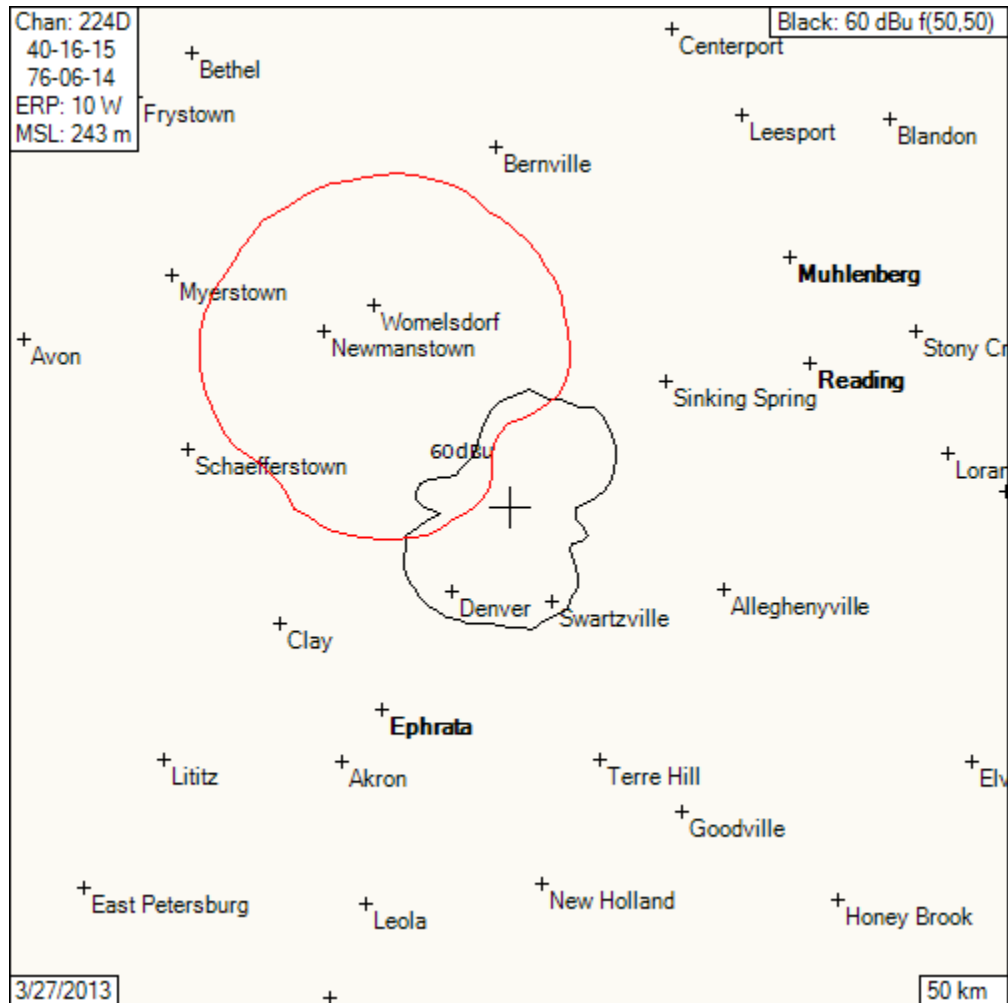
Transmitter Location

The proposed transmitter location is an existing communications tower, ASR # 1239677.

Antenna

An omnidirectional antenna is proposed.

Minor Change Qualifications



The originally proposed 60 dBu f(50,50) contour, shown in red, overlaps the proposed 60 dBu f(50,50) contour, shown in black.

The proposed frequency change is from channel 224 to channel 227, a mutually exclusive channel.

Therefore, the proposal is for a minor change.

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Non-Fill-In Translator

The proposed primary station is non-commercial / educational FM station WRTI, Philadelphia, PA, facility ID # 65190. The 60 dBu f(50,50) contour of WRTI does not overlap the proposed 60 dBu f(50,50) contour. Therefore, the proposal is for non-fill-in service.

The proposal is for an ERP of 10 Watts and a center of radiation of 234 m AMSL.

The following values for twelve evenly-spaced radials were retrieved from the FCC's online HAAT calculator:

0.0°	92.6 meters
30.0°	108.5 meters
60.0°	108.4 meters
90.0°	33.7 meters
120.0°	38.1 meters
150.0°	97.8 meters
180.0°	105.5 meters
210.0°	119.9 meters
240.0°	109.1 meters
270.0°	54.6 meters
300.0°	24.9 meters
330.0°	35.3 meters

The greatest HAAT is 119.9 meters at 210°. The maximum permitted ERP east of the Mississippi River for a non-fill-in translator with a maximum HAAT of 116 to 140 meters is 13 watts. The proposal is for 10 Watts and therefore meets the requirements of §74.1235(b)(1).

The owner is not affiliated with primary licensee and is not receiving financial support from the primary licensee, but has obtained rebroadcast consent from the primary licensee.

Program delivery will be via off-air pickup.

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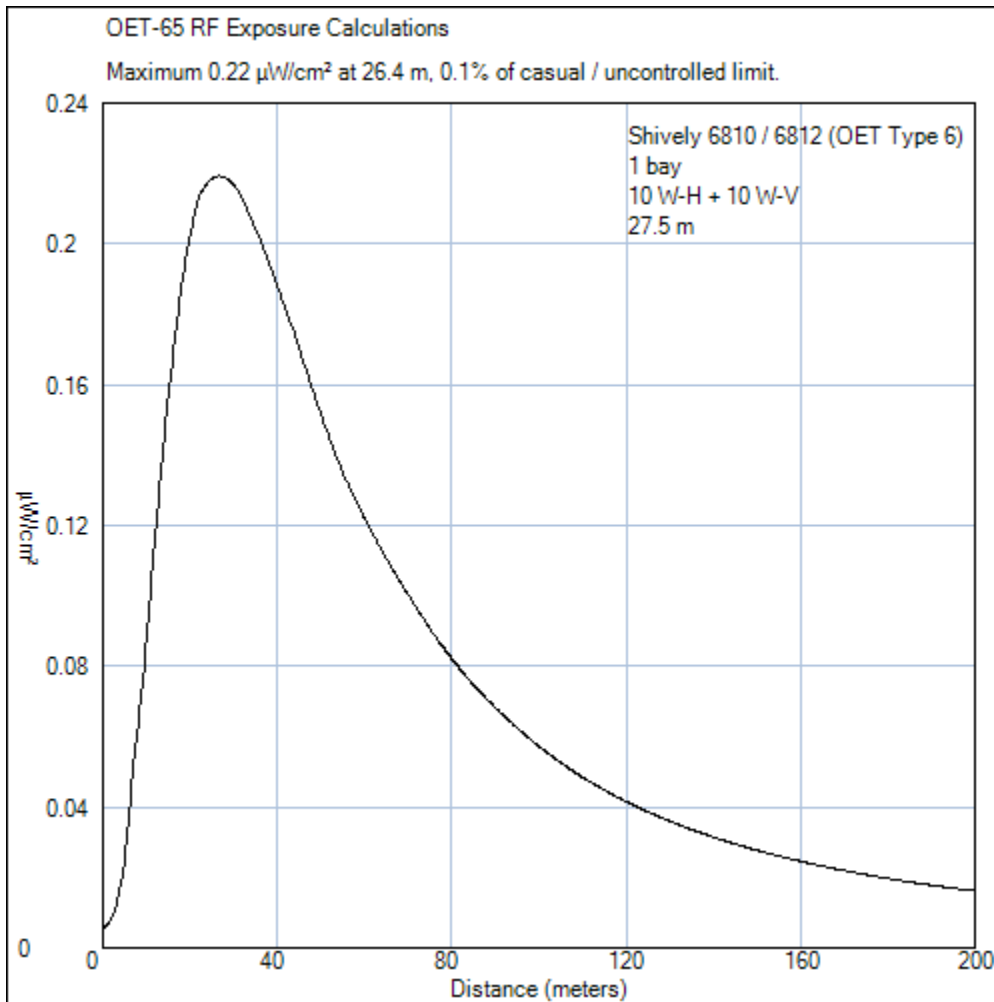
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RF Exposure

The proposed ERP is 10 W-H + 10 W-V, and the antenna will be located 27.5 m above ground. For the proposed Shively 6812-B1 antenna, the exposure is 0.1% of the limit for casual / uncontrolled exposure.



The applicant agrees to coordinate with other users of the site to reduce power or shut down in order to protect workers at the site.

Environmental

The application specifies an existing tower, ASR #1239677. No change to the height of the tower is proposed. No construction or excavation is proposed. As indicated above, RF exposure levels will be safe. Therefore, the application is not for a major environmental action.

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Form 349 Tech Box Data

Channel	227
Primary Station	Facility ID 65190 WRTI (FM) Philadelphia, PA
Delivery Method	Direct off-air pickup
Coordinates (NAD-27)	40 16 15 N Lat 76 06 14 W Lon
ASR	1239677
Site Elevation AMSL	215.5 m
Overall Tower Height AGL	42.7 m
Radiation Center AGL	27.5 m
Effective Radiated Power	10 W-H + 10 W-V
Antenna type	Omnidirectional
Manufacturer / Model	SHI 6812B-1

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LPFM Preclusion Study

The proposed location is within the LPFM market grids of Lancaster and Reading, and within the 39 km extensions of the LPFM market grids of York and Allentown. All four markets are spectrum-limited and below Top-50. Auction 83 applications and second adjacent channels were not protected. LPFM Site Preclusion studies are not required.

The location is outside the nearby Wilmington 39 km grid extension at 40.2 km from the nearest point on the grid.

Lancaster

Lancaster, PA
Latitude 40-02-16
Longitude 076-18-21
Grid Size 31 x 31
Micro FM 100 Watts at 30m HAAT
Co-Channel and 1st Adjacent Protected
2nd Adjacent Channel Not Protected
3rd Adjacent Channel Not Protected
I.F. Not Protected
TV Channel 6 Protected
CP Records Protected
APP Records Protected
FM Translators Protected
TV Channel 6 Translators/LP Protected
Auc83 FX App Records Not Protected

Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail
200	0	220	0	240	0	260	49	280	0
201	0	221	0	241	0	261	0	281	0
202	0	222	0	242	0	262	0	282	0
203	0	223	0	243	16	263	0	283	12
204	0	224	0	244	0	264	0	284	25
205	0	225	3	245	0	265	0	285	0
206	0	226	0	246	0	266	0	286	0
207	0	227	0	247	0	267	0	287	0
208	0	228	0	248	0	268	0	288	0
209	0	229	0	249	0	269	0	289	0
210	0	230	0	250	0	270	0	290	0
211	0	231	0	251	14	271	0	291	158
212	0	232	0	252	0	272	0	292	0
213	0	233	0	253	0	273	0	293	0
214	0	234	0	254	0	274	0	294	0
215	0	235	0	255	11	275	9	295	0
216	0	236	0	256	0	276	0	296	665
217	0	237	32	257	0	277	0	297	0
218	0	238	340	258	0	278	0	298	0
219	0	239	55	259	1	279	0	299	0
								300	0

Total 1390

The proposal is for channel 227. There is no availability for LPFM proposals on Channels 226, 227, and 228 anywhere on the grid, so the application cannot preclude any such proposals.

Therefore, the application passes the grid test for the Lancaster market.

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Reading

Reading, PA
Latitude 40-20-08
Longitude 075-55-38
Grid Size 31 x 31
Micro FM 100 Watts at 30m HAAT
Co-Channel and 1st Adjacent Protected
2nd Adjacent Channel Not Protected
3rd Adjacent Channel Not Protected
I.F. Not Protected
TV Channel 6 Protected
CP Records Protected
APP Records Protected
FM Translators Protected
TV Channel 6 Translators/LP Protected
Auc83 FX App Records Not Protected

Chan	Avai l	Chan	Avai l	Chan	Avai l	Chan	Avai l	Chan	Avai l
200	0	220	0	240	0	260	0	280	0
201	0	221	0	241	0	261	0	281	0
202	0	222	0	242	0	262	0	282	0
203	0	223	0	243	0	263	0	283	0
204	0	224	0	244	0	264	0	284	0
205	0	225	69	245	0	265	0	285	0
206	0	226	0	246	0	266	0	286	0
207	0	227	0	247	0	267	0	287	0
208	0	228	16	248	0	268	0	288	0
209	0	229	0	249	0	269	0	289	0
210	0	230	0	250	0	270	0	290	0
211	0	231	0	251	0	271	0	291	0
212	0	232	0	252	0	272	0	292	0
213	0	233	0	253	8	273	0	293	0
214	0	234	0	254	0	274	0	294	0
215	0	235	0	255	0	275	0	295	0
216	0	236	0	256	0	276	0	296	201
217	0	237	0	257	0	277	0	297	0
218	0	238	0	258	0	278	0	298	0
219	0	239	0	259	0	279	0	299	0
								300	7

Total		301							

The proposal is for channel 227. There is no availability of channels 226 and 227 anywhere in the grid. Channel 228 is first adjacent, and there are 16 grid points on which an LPFM proposal on channel 228 would be acceptable.

Based on the 60 dBu contour distance of less than 7.3 km, the application would preclude any available points within 15 km of the transmitter site.

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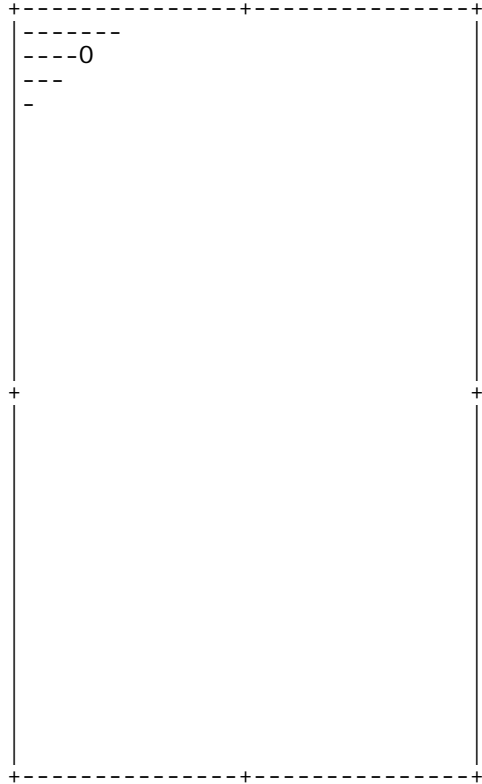
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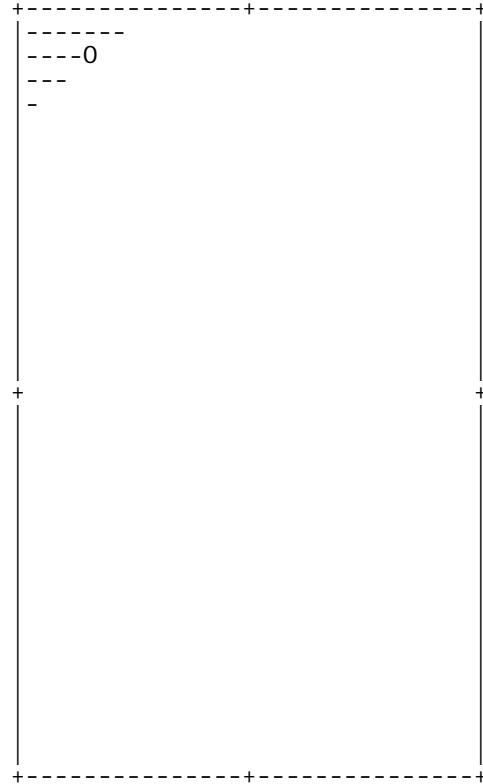
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Reading, PA
Latitude 40-20-08
Longitude 075-55-38
Least preclusive siting
Availability of Channel 228 (X)



Reading, PA
Latitude 40-20-08
Longitude 075-55-38
Most preclusive siting
Availability of Channel 228 (X)



Point #836 at 40-34-08 076-06-38

Point #836 at 40-34-08 076-06-38

The proposed site in the southwest region of the grid is distant from these points, which are in the northwest corner.

The southernmost available point is 42-32-08, 076-10-38. That location is 30.0 km from the proposed transmitter site.

The following map confirms that the 15 km exclusion zone from the application does not impact the available area.

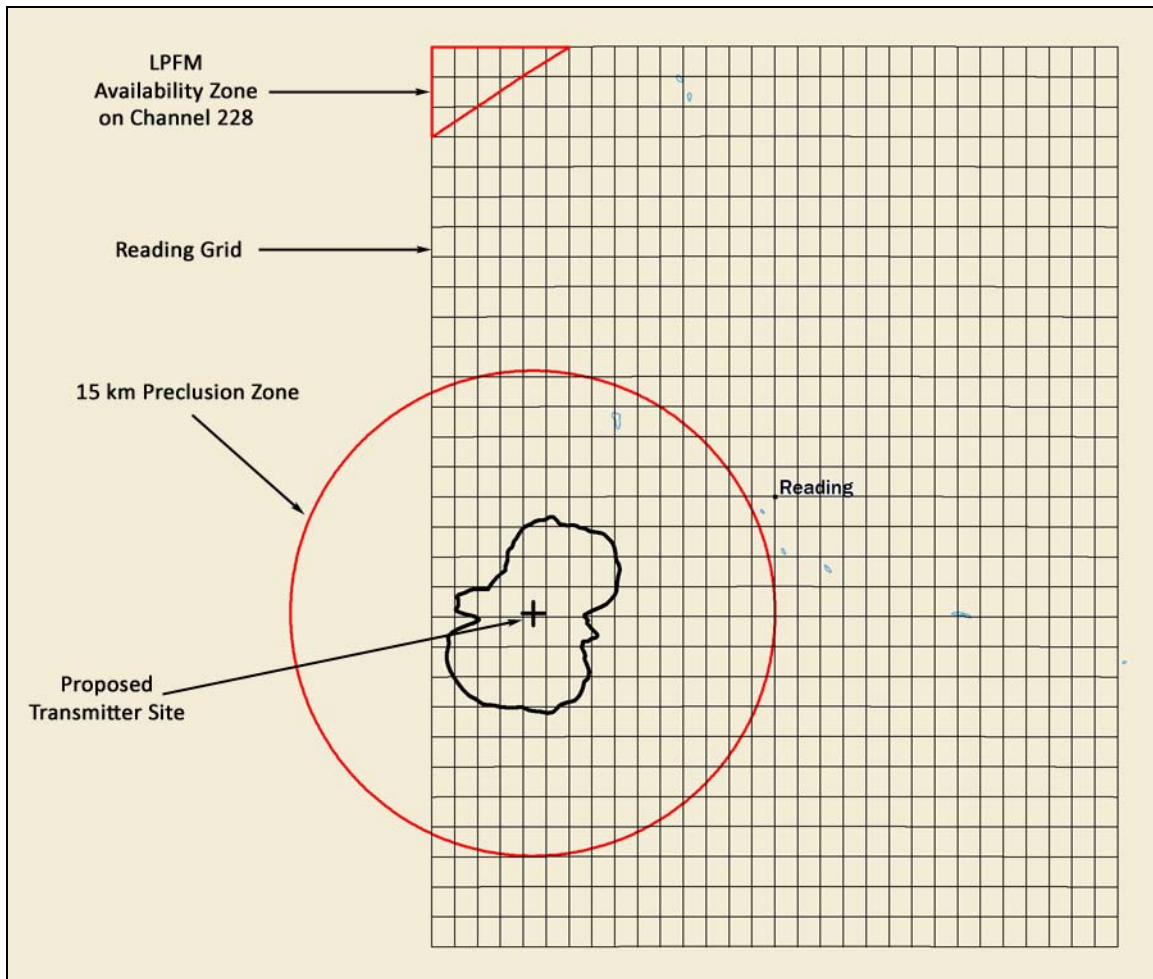
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The proposed facility will not preclude any LPFM proposal in the area of the grid points that are available on channel 228.

The application does not preclude any LPFM proposal, and therefore passes the grid test for the Reading market.

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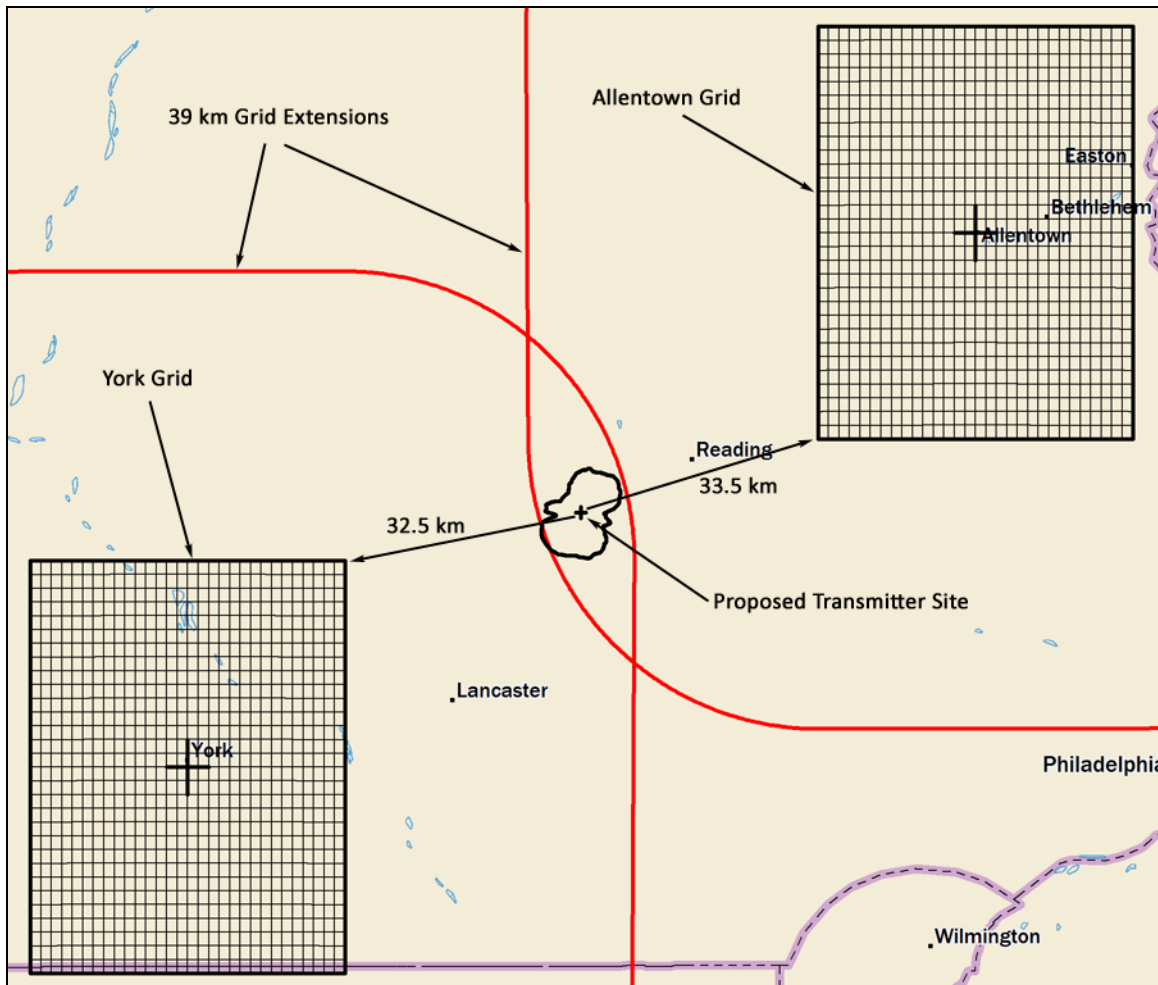
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York and Allentown

Based on 360 radials, the maximum extent of the proposed 60 dBu contour is 6.6 km at 43°. The distance requirement in §73.807(b) between an LPFM proposal and a translator with a maximum 60 dBu contour of less than 7.3 km is 26 km for co-channel LPFM proposals.

It would be impossible for this proposed translator to preclude an LPFM proposal at any point on or within the grid if the translator is located more than 26 km from the grid.

As shown on the map below, the proposed site is 32.5 km from the nearest point on the York grid and 33.5 km from the nearest point on the Allentown grid:



The application cannot preclude an LPFM proposal within either grid, and therefore passes the grid test for these markets.

Conclusion

The application passes the LPFM grid tests for all markets.

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