

**ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application**

- 1) Statement-Nature Of Proposal
- 2) Exhibit 1 - Proposed W223CN 60 dBu and 25 mile ARC with WPJX AM 1500 Facility ID 49293(Primary Station).
- 3) Exhibit 2 - W223CN - 54 dBu And First Adjacent WCPY 60 dBu.
- 4) Exhibit 3 – W223CN Proposed 100 dBu And Second Adjacent WVTY 60 dBu.
- 5) Exhibit 4 – W223CN Proposed 48 dBu And First Adjacent WPWR Licensed 54 dBu.
- 6) Exhibit 5 - Proposed W223CN 34 dbu and Co Channel WCLR 54 dBu Contour.
- 7) Exhibit 6 – W223CN 34 dBu and Co Channel WMBZ 54 dBu Contour.
- 8) Exhibit 7 - Proposed Kathrein K524017 2C Directional Pattern.
- 9) Exhibit 8 – Proposed WMBZ overlap Area Reduction
- 10) Exhibit 9 – Co Channel WMBZ Contours/Persons/Letters
- 11) Exhibit 9a – Co Channel WMBZ Contours/Persons/Letters Expanded View
- 12) Exhibit 9c – Co Channel WMBZ Contours//Letters/Pass/Fail -20 dBu U/D
- 13) Exhibit 9d – Contours Letters/Listener #3 Pass/Fail -20 dBu U/D

**ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application**

Statement - Nature Of Proposal

Polnet Communications, Ltd. ("Polnet") is the licensee of Translator Station W223CN, 92.5 FM, Zion, Illinois (Facility ID 142464) W223CN is a licensed Class D FM station with authority to operate .065 kW with a Directional facility (BLFT-20161201AEQ). WPJX AM 1500-Zion, Illinois is the Primary station (BL-20091230ACS). Facility ID(49293).

Polnet herein proposes an amendment to the instant application(0000208896) and proposes to utilize a different antenna than the current License(BLFT-20161201AEQ). Polnet is requesting a change to a Kathrein K524017 2C directional pattern. Polnet Proposes the currently licensed tower and coordinates for this instant application(Tower ASR #1008305). Polnet requests a change from 249'(76 meters) to 270 Feet(82.3 meters).

Polnet Requests operation at .250 kW power ERP Vertical and Horizontal.

Polnet is addressing the concerns of WMBZ FM by reducing 34 dBu(50,10) WMBZ 54 dBu(50,50) in this amendment. The overlap area is reduced by 125.85 Sq Miles(315.48 Km). As a result population potentially affected is reduced by 331,071 persons.

Polnet has satisfied 74.1203(a)(3) as defined by 74.1201(k) which requires a total of 15 letters for a population of 1,000,000 to 1,499,999. As a result of the amendment 9 letters remain.

The proposed W223CN FM 92.5 amended 60 dBu contour remains within the 25 mile arc of the primary station WPJX AM 1500(BL-20091230ACS).

**ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application
Statement - Nature Of Proposal Page 2**

W223CN FM 92.5 Proposed Site

Tower ASR:

1008305

Coordinates: NAD 83

42-26-34.8 N

88-03-25.8 W

Elevation:

AGL: 270.0'(82.3 Meters)

G-AMSL: 833.33' (254.00m)

RC-AMSL: 1103.33' (336.30m)

HAAT: 345.77' (105.40m)

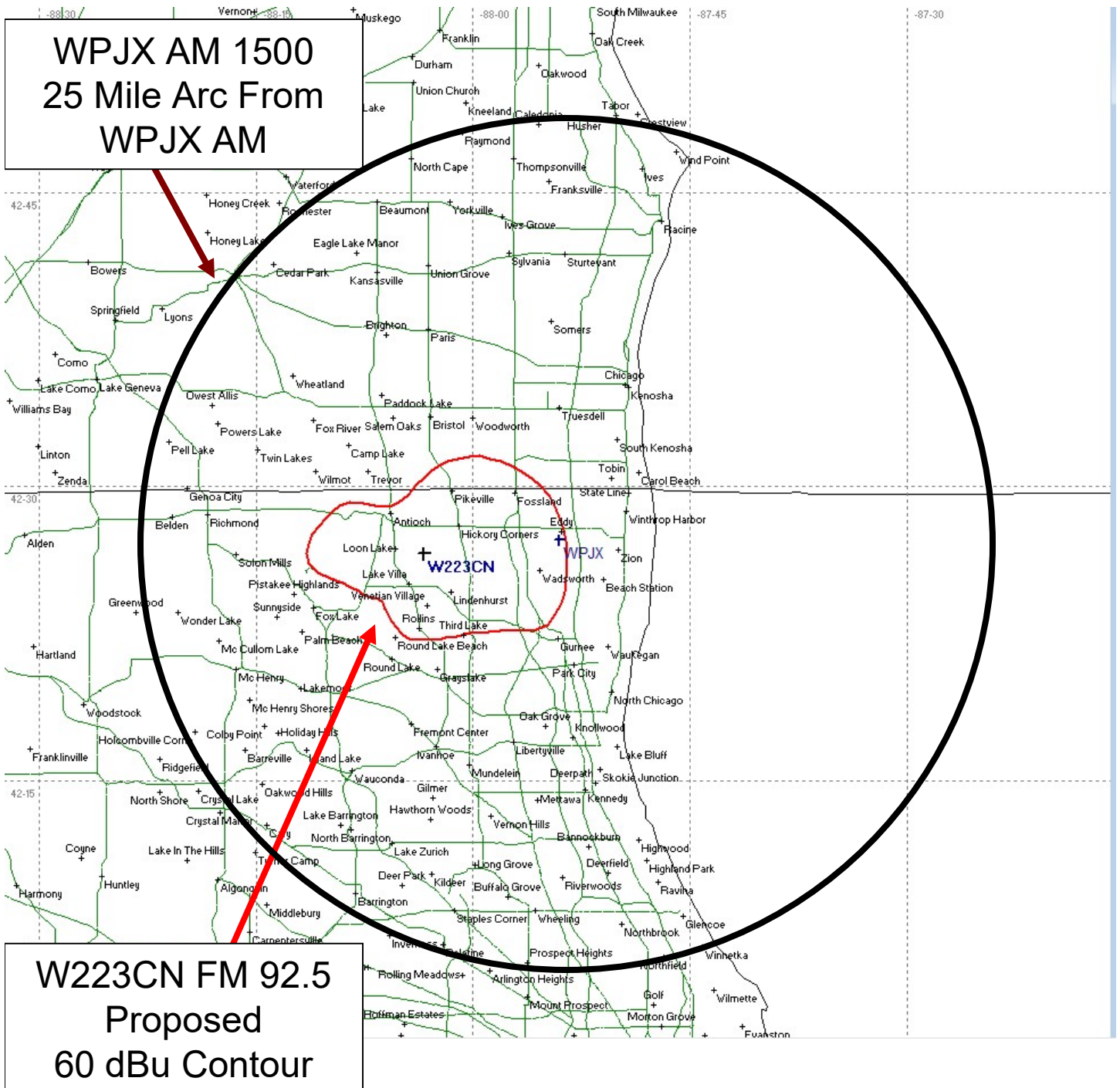
Directional Antenna

Kathrein K524017 2C

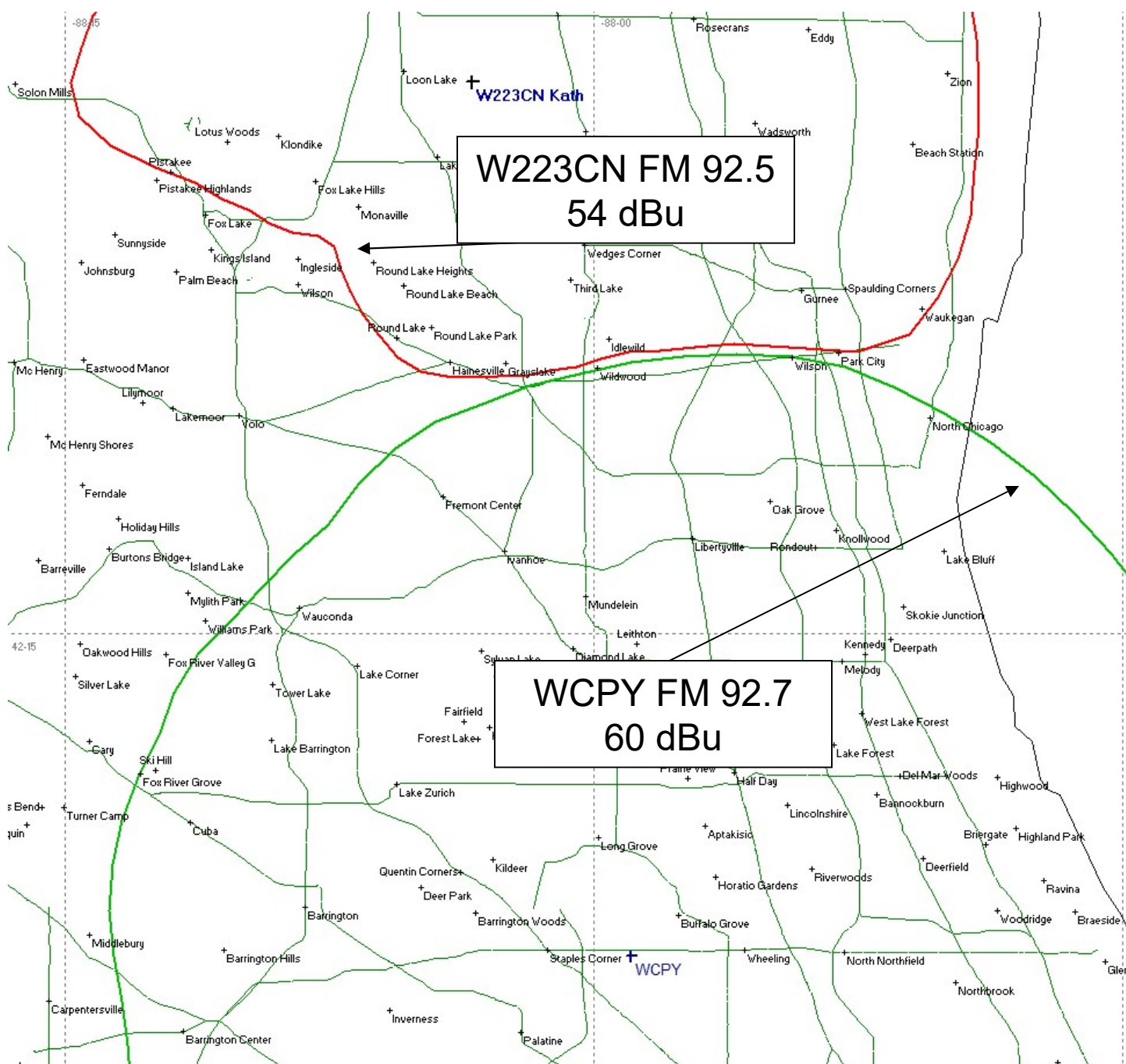
Power:

250 Watts ERP

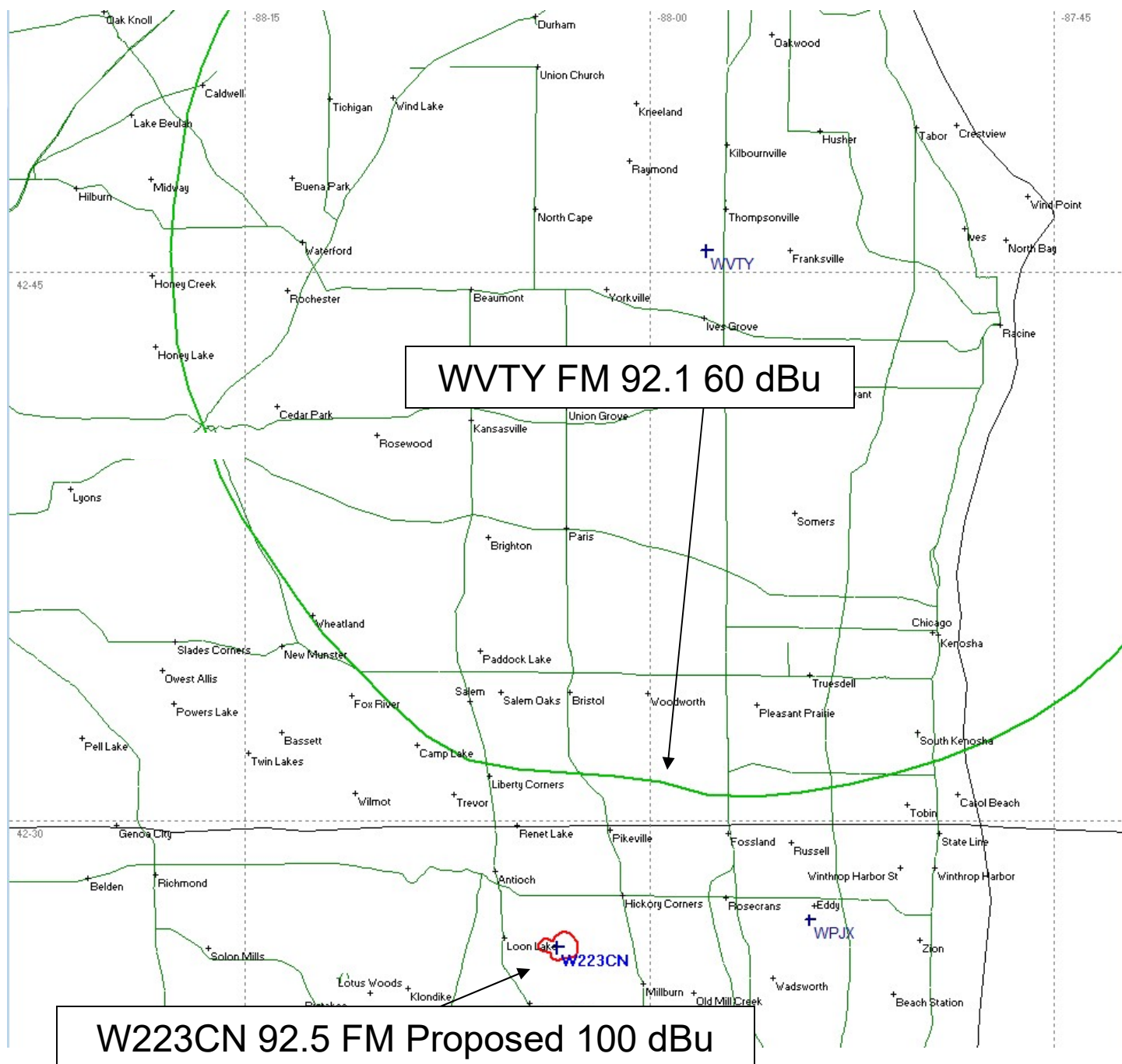
ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application
Exhibit 1 - 25 Mile Arc



Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application
Exhibit 2
W223CN - 54 dBu First Adjacent WCPY 60 dBu

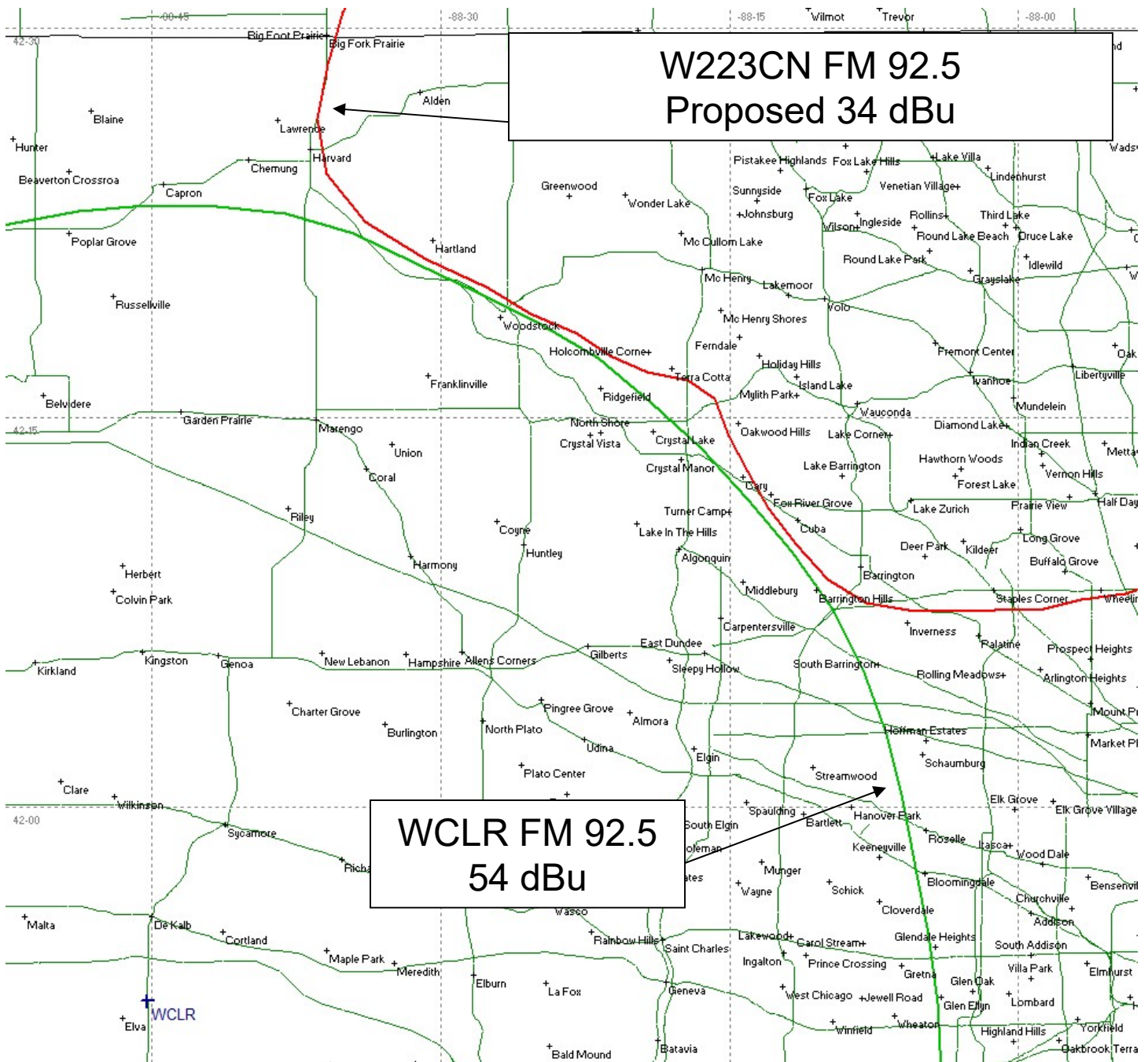


W223CN Proposed 100 dBu - Second Adjacent WVTY 60 dBu



**ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application
Exhibit 5**

Proposed W223CN 34 dbu and Co Channel WCLR 54 dBu Contour



**ENGINEERING STATEMENT
APPLICATION FCC 349**

Prepared For Polnet Communications, Ltd

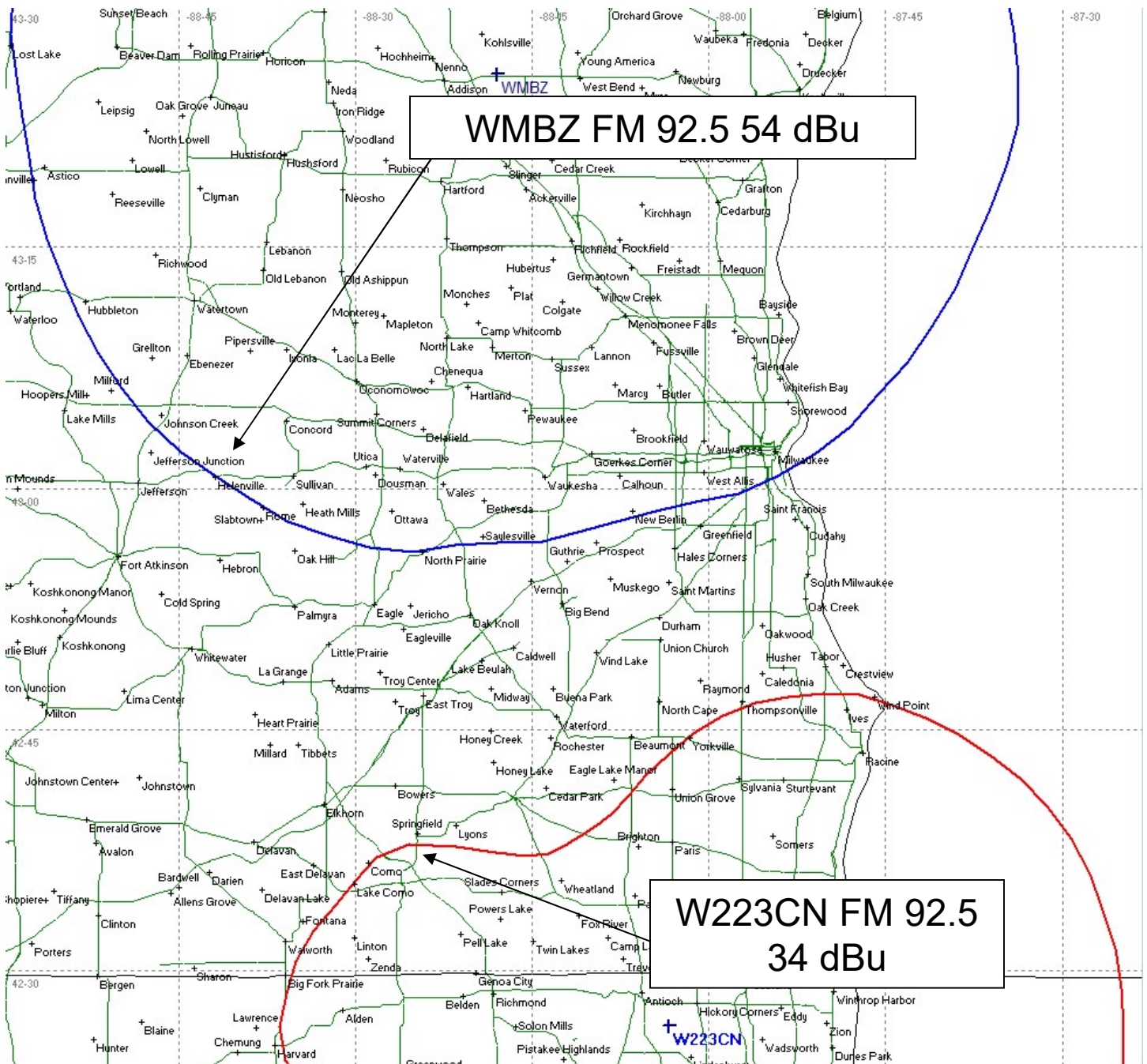
W223CN Zion, Illinois

Facility ID 142464 92.5 FM .250 kW

FCC Form 349-Instant Application

Exhibit 6

W223CN 34 dBu And Co Channel WMBZ 54 dBu Contour



ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application
Exhibit 7
Kathrein K524017 2C Directional Pattern

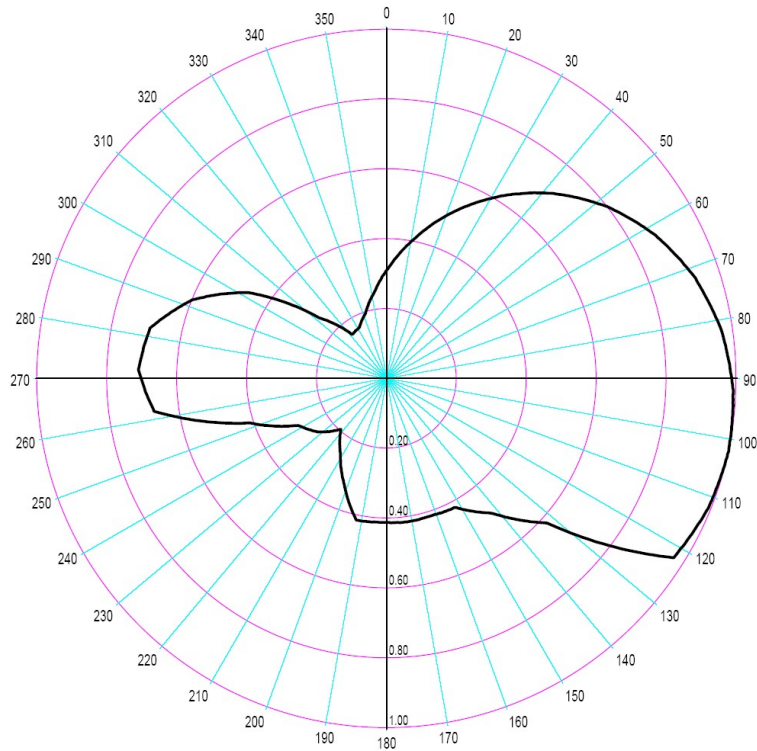
ComStudy

K524017 2C

Horizontal Pattern

1

Vertical Pattern



Azim	Rel.FS	ERP [W]	dBk
0.0	0.310	24.035	-16.191
5.0	0.352	30.989	-15.088
10.0	0.397	39.419	-14.043
15.0	0.445	49.528	-13.052
20.0	0.495	61.283	-12.127
25.0	0.545	74.288	-11.291
30.0	0.595	88.545	-10.528
35.0	0.645	104.051	-9.828
40.0	0.693	120.114	-9.204
45.0	0.739	136.589	-8.646
50.0	0.782	152.947	-8.155
55.0	0.821	168.583	-7.732
60.0	0.857	183.692	-7.359
65.0	0.889	197.666	-7.041
70.0	0.917	210.313	-6.771
75.0	0.940	220.996	-6.556
80.0	0.960	230.500	-6.373
85.0	0.975	237.759	-6.239

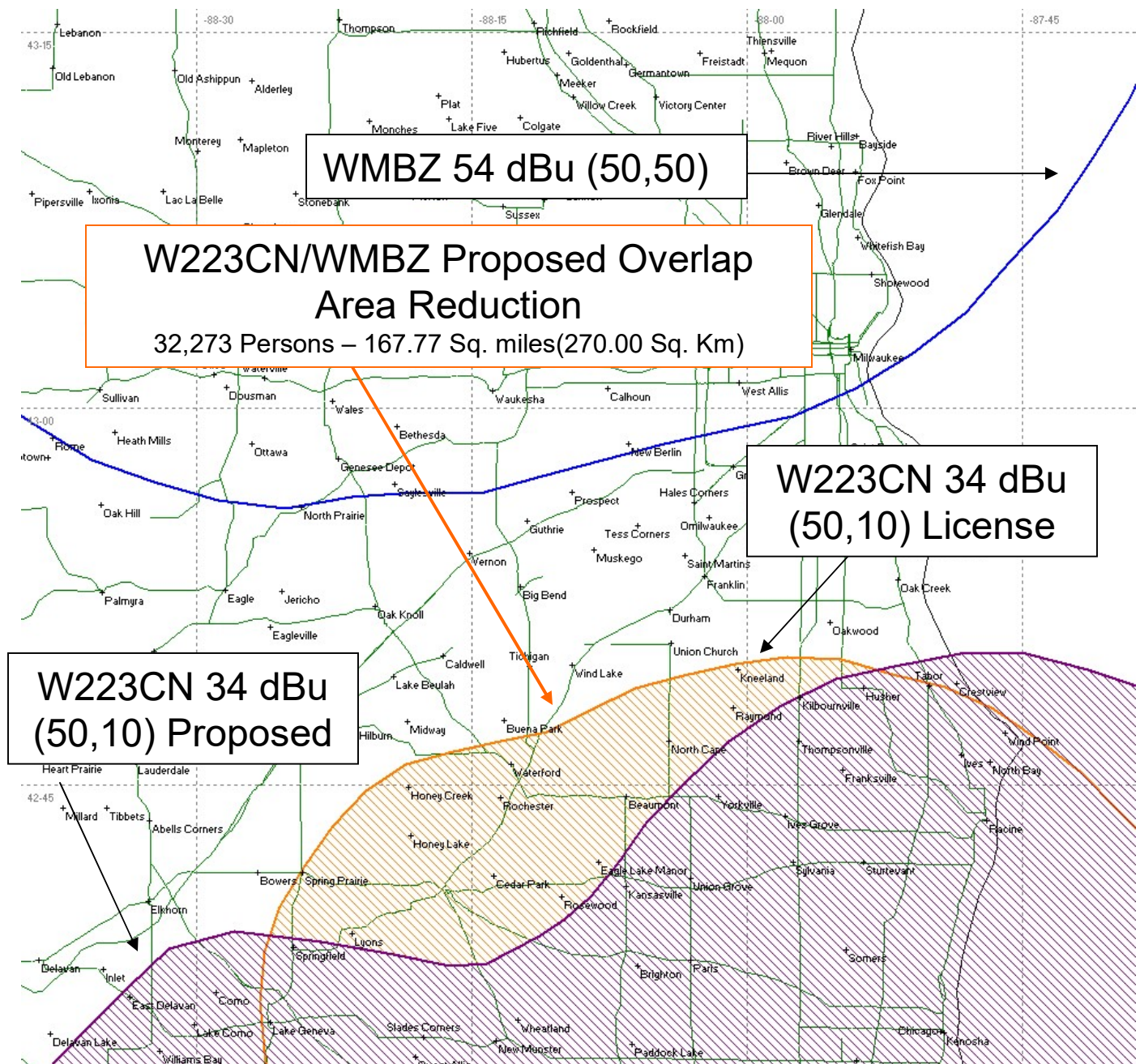
Azim	Rel.FS	ERP [W]	dBk
90.0	0.987	243.648	-6.132
95.0	0.994	247.116	-6.071
100.0	0.998	249.109	-6.036
105.0	0.997	248.610	-6.045
110.0	0.993	246.619	-6.080
115.0	0.984	242.169	-6.159
120.0	0.972	236.298	-6.265
125.0	0.863	186.273	-7.299
130.0	0.688	118.387	-9.267
135.0	0.579	83.847	-10.765
140.0	0.514	66.078	-11.799
145.0	0.467	54.546	-12.632
150.0	0.432	46.676	-13.309
155.0	0.416	43.283	-13.637
160.0	0.414	42.868	-13.679
165.0	0.413	42.661	-13.700
170.0	0.414	42.868	-13.679
175.0	0.414	42.868	-13.679

Azim	Rel.FS	ERP [W]	dBk
180.0	0.412	42.454	-13.721
185.0	0.412	42.454	-13.721
190.0	0.414	42.868	-13.679
195.0	0.388	37.652	-14.242
200.0	0.343	29.425	-15.313
205.0	0.302	22.811	-16.419
210.0	0.265	17.564	-17.554
215.0	0.233	13.578	-18.672
220.0	0.206	10.614	-19.741
225.0	0.211	11.135	-19.533
230.0	0.238	14.167	-18.487
235.0	0.260	16.907	-17.719
240.0	0.278	19.329	-17.138
245.0	0.323	26.094	-15.835
250.0	0.386	37.265	-14.287
255.0	0.490	60.051	-12.215
260.0	0.620	96.142	-10.171
265.0	0.683	116.673	-9.330

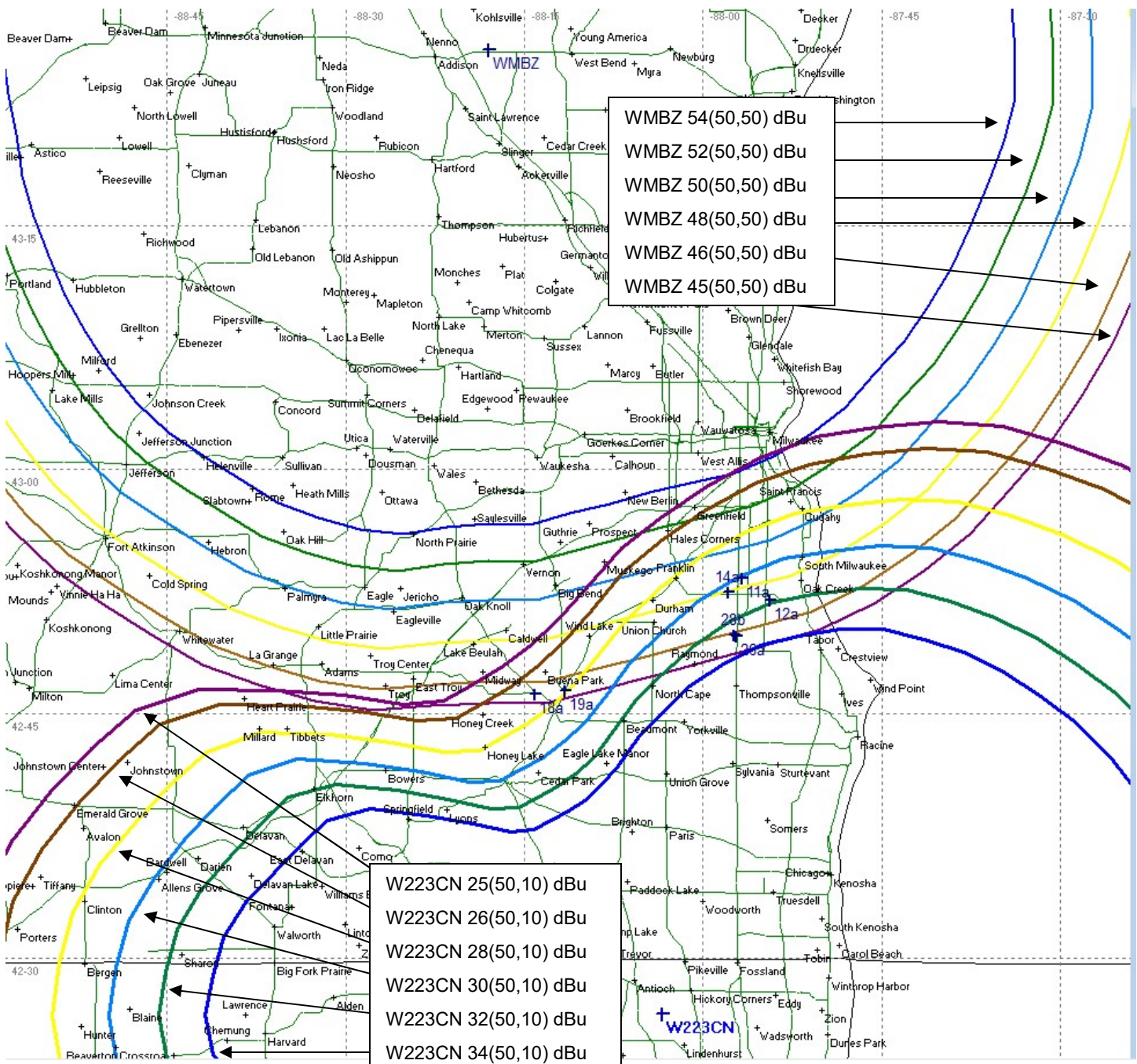
Azim	Rel.FS	ERP [W]	dBk
270.0	0.702	123.254	-9.092
275.0	0.704	123.958	-9.067
280.0	0.695	120.808	-9.179
285.0	0.664	110.272	-9.575
290.0	0.618	95.522	-10.199
295.0	0.559	78.154	-11.070
300.0	0.491	60.296	-12.197
305.0	0.402	40.418	-13.934
310.0	0.300	22.510	-16.476
315.0	0.230	13.231	-18.784
320.0	0.180	8.104	-20.913
325.0	0.161	6.483	-21.882
330.0	0.164	6.727	-21.722
335.0	0.175	7.660	-21.158
340.0	0.190	9.029	-20.444
345.0	0.212	11.241	-19.492
350.0	0.239	14.286	-18.451
355.0	0.272	18.504	-17.327

**ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application
Exhibit 8**

**W223CN 34 dBu(50,10)License, W223CN Proposed 34 dBu(50,10)
Co Channel WMBZ 54 DBU(50,50) Contour
Proposed Overlap Reduction Area**



ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application
Exhibit 9
Co Channel WMBZ Contours/Persons/Letters



**ENGINEERING STATEMENT
APPLICATION FCC 349
Prepared For Polnet Communications, Ltd
W223CN Zion, Illinois
Facility ID 142464 92.5 FM .250 kW
FCC Form 349-Instant Application
Exhibit 9c**

Co Channel WMBZ Contours//Letters/ Pass Fail -20 dbu U/D

WMBZ Listener Data:

1a) 42-47-50.5 N 88-24-13.1 W- Pass	20a) 42-52-20.9 N 87-56-13.8 W- Fail
2a) 42-46-59.1 N 88-24-17.2 W- Pass	21a) 42-47-31.5 N 88-23-06.1 W- Pass
3a) 42-45-37.9 N 88-10-10.7 W- Pass	22a) 42-54-58.2 N 87-56-08.6 W- Pass
4a) 42-51-05.3 N 88-33-36.0 W- Pass	23a) 42-51-05.0 N 88-19-18.7 W- Pass
5a) 42-53-28.2 N 88-01-30.1 W- Pass	24a) 42-53-06.1 N 88-09-30.3 W- Pass
6a) 42-53-27.3 N 88-17-41.1 W- Pass	25a) 42-55-55.3 N 88-09-30.3 W- Pass
7a) 42-52-41.5 N 88-18-58.4 W- Pass	26a) 42-49-47.0 N 87-57-09.8 W- Fail
8a) 42-54-24.6 N 88-14-21.8 W- Pass	27a) 42-57-32.6 N 87-56-00.4 W- Pass
9a) 42-52-19.6 N 88-17-56.3 W- Pass	28a) 42-51-02.5 N 87-56-36.9 W- Fail
10a) 42-50-32.7 N 88-04-45.2 W- Pass	28b) 42-49-50.3 N 87-57-23.8 W- Fail
10b) 42-47-30.6 N 88-13-04.4 W- Pass	29a) 42-58-07.2 N 88-04-21.3 W- Pass
11a) 42-53-19.6 N 87-56-41.9 W- Fail	30a) 42-49-57.0 N 88-43-04.5 W- Pass
12a) 42-51-58.8 N 87-54-24.2 W- Fail	
13a) 42-56-05.9 N 87-59-23.3 W- Pass	
14a) 42-52-29.0 N 87-57-51.5 W- Fail	
15a) 42-54-03.5 N 88-08-27.0 W- Pass	
16a) 42-53-17.8 N 88-14-51.5 W- Pass	
17a) 42-56-22.3 N 87-58-59.9 W- Pass	
18a) 42-46-14.3 N 88-14-09.1 W- Fail	
19a) 42-46-23.5 N 88-11-37.5 W- Fail	

9 Listeners remain

Criteria 1 - The required minimum number of valid listener complaints as determined using Table 1 of §74.1203(a)(3) and as defined in §74.1201(k). Affected station WMBZ(FM) serves a population of 1,467,662 within its Class B, 54 dBμ F(50:50) Service Contour. Table 1 of §74.1203(a)(3) mandates a minimum of fifteen (15) listener complaints for populations ranging from 1,000,000-1,499,999.

ENGINEERING STATEMENT

APPLICATION FCC 349

Prepared For Polnet Communications, Ltd

W223CN Zion, Illinois

Facility ID 142464 92.5 FM .250 kW

FCC Form 349-Instant Application

Exhibit 9d

Co Channel WMBZ Contours//Letters/Listener #3-Pass Fail -20 dbu U/D

