

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 WPWX 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 IRTE P3AC 1R Pattern.
- 9) Exhibit 8 – Proposed WMBZ overlap Area Reduction W223CN 25 dBu (50,10). Vs WMBZ 45 dBu (50,50). Zero Overlap.
- 10) Exhibit 9 – Co Channel WMBZ Contours/Persons/Letters.
- 11) Exhibit 9b – Co Channel WMBZ Contours/Persons/Letters Expanded View.
- 12) Exhibit 9c – Co Channel WMBZ Contours//Letters/Pass/Fail -20 dBu U/D.
- 13) Exhibit W223CN Proposed 60 dBu(50,50)
Co Channel WMBZ 54 DBU(50,50) Contour
Proposed Overlap Reduction Area amended P1-P2-P3-P4 Combined.
- 14) W223CN Proposed 60 dBu(50,50)
Co Channel WMBZ 54 DBU(50,50) Contour
Proposed Overlap Reduction Area Amendment 1.
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Proposed Overlap Reduction Area Amendment 4.

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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 a third 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 IRTE P3AC 1R 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) area in this amendment. The License compared to Proposed area is reduced by 769.11 Sq Miles(1861.68 Km). As a result population potentially affected is reduced by 331,286 persons.

In this third amendment Polnet has totally eliminated any W223CN 25 dBu(50,10) overlap with the WMBZ 45 dBu (50,50) as shown in Exhibit 9 and 9B.

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 0(Zero) 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).

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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)

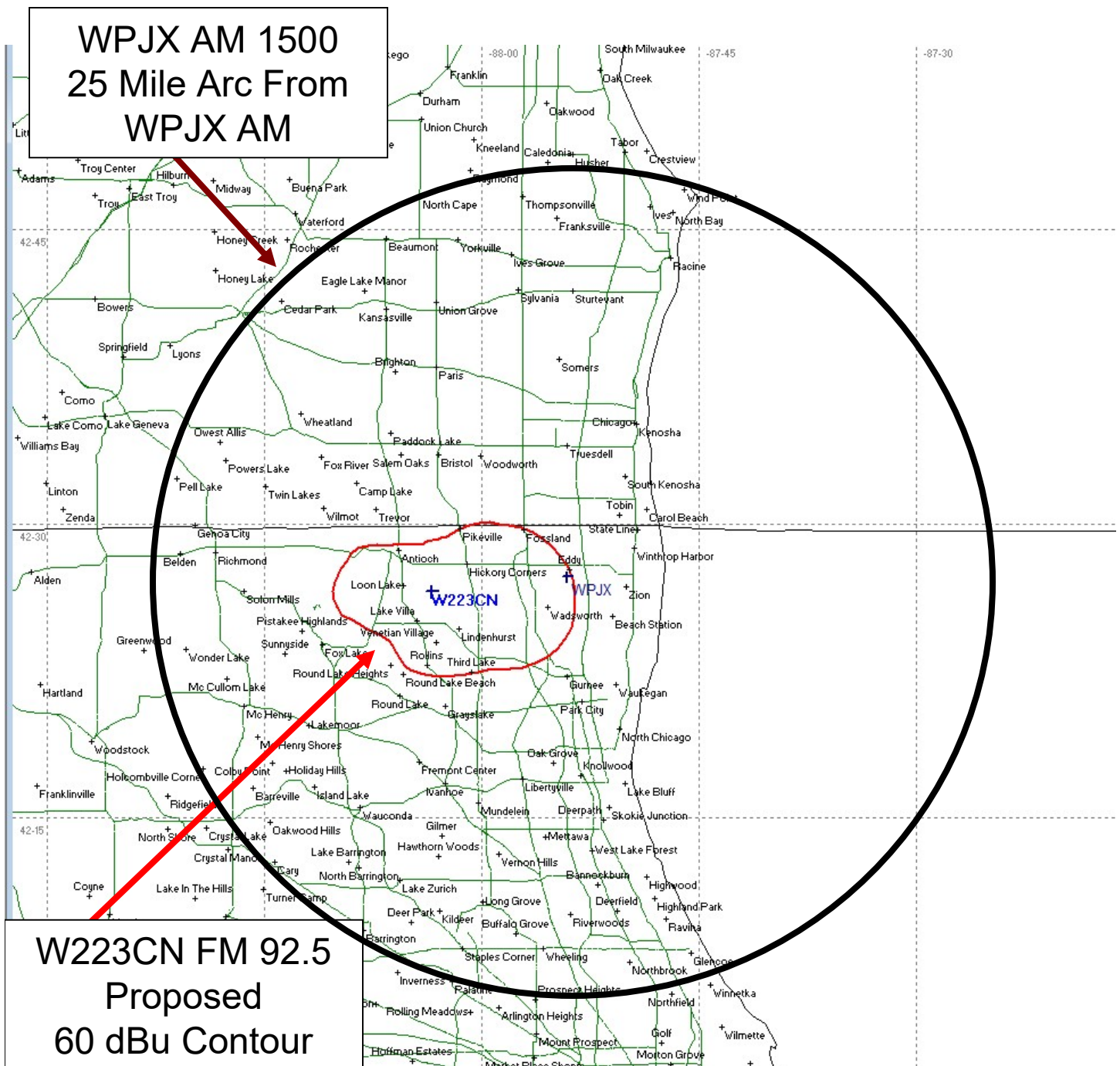
Directional Antenna

IRTE P3AC 1R

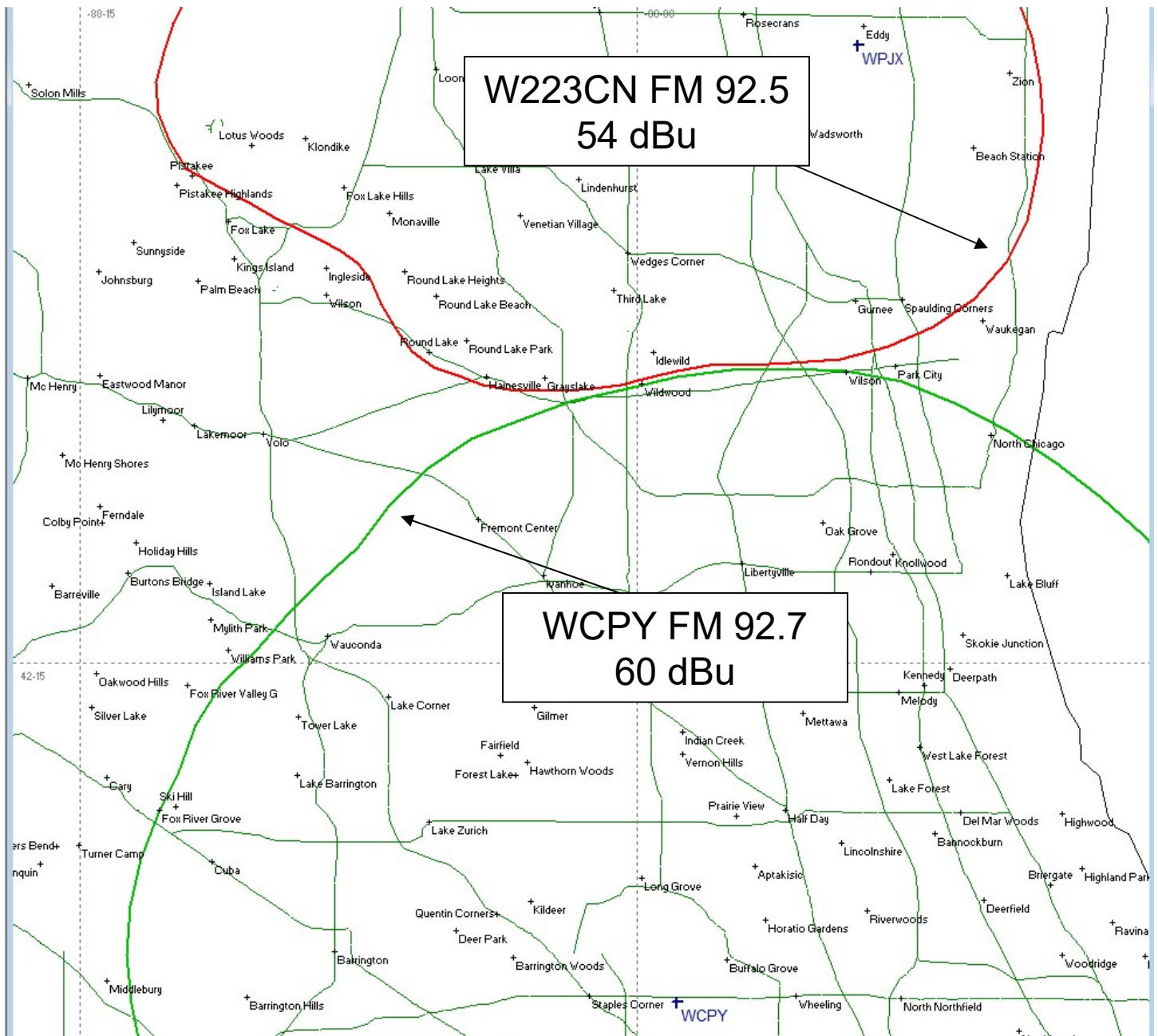
Power:

250 Watts ERP

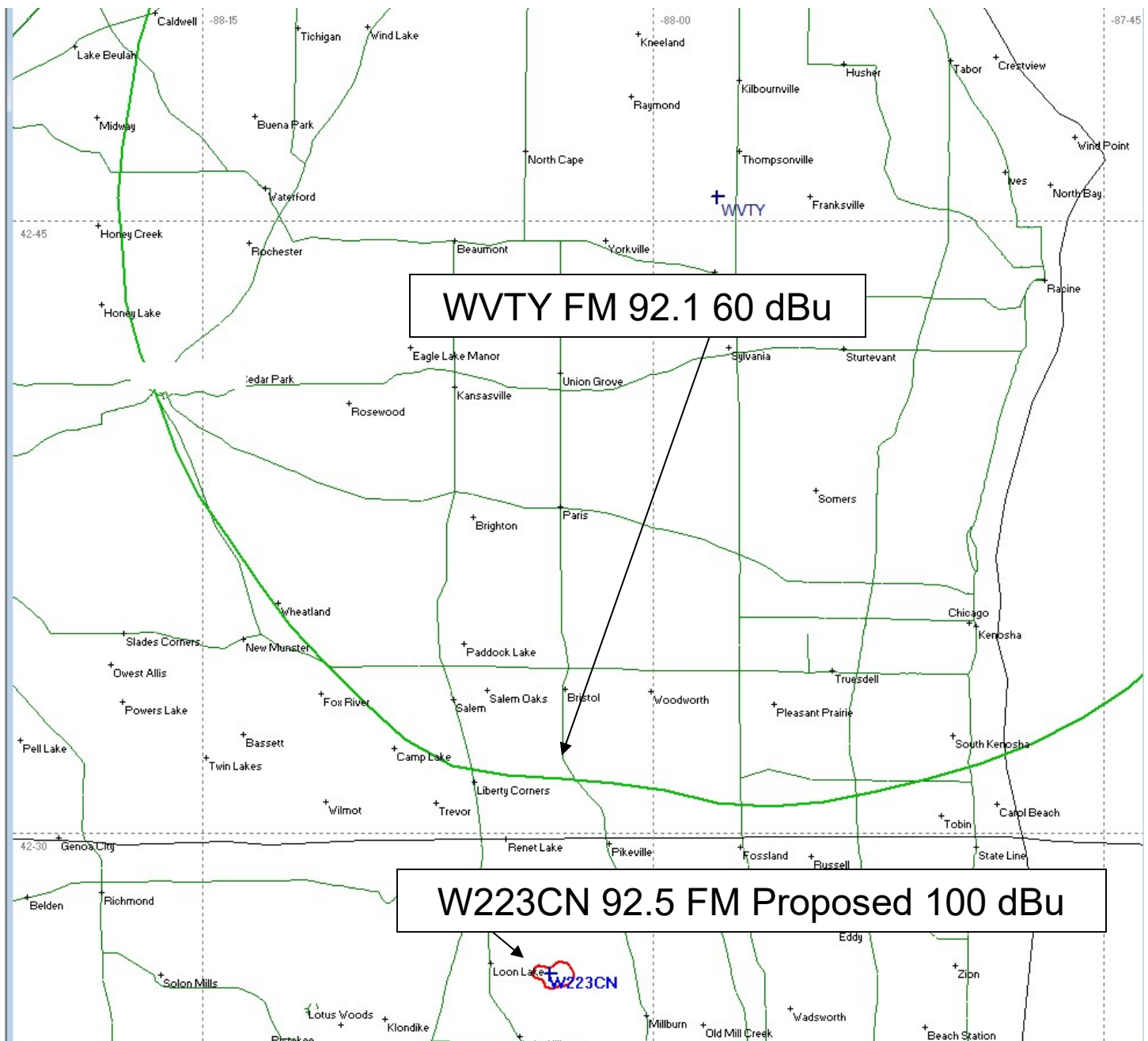
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Exhibit 1 - 25 Mile Arc



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Exhibit 2
W223CN - 54 dBu First Adjacent WCPY 60 dBu**



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Exhibit 3
W223CN Proposed 100 dBu - Second Adjacent WVTY 60 dBu**



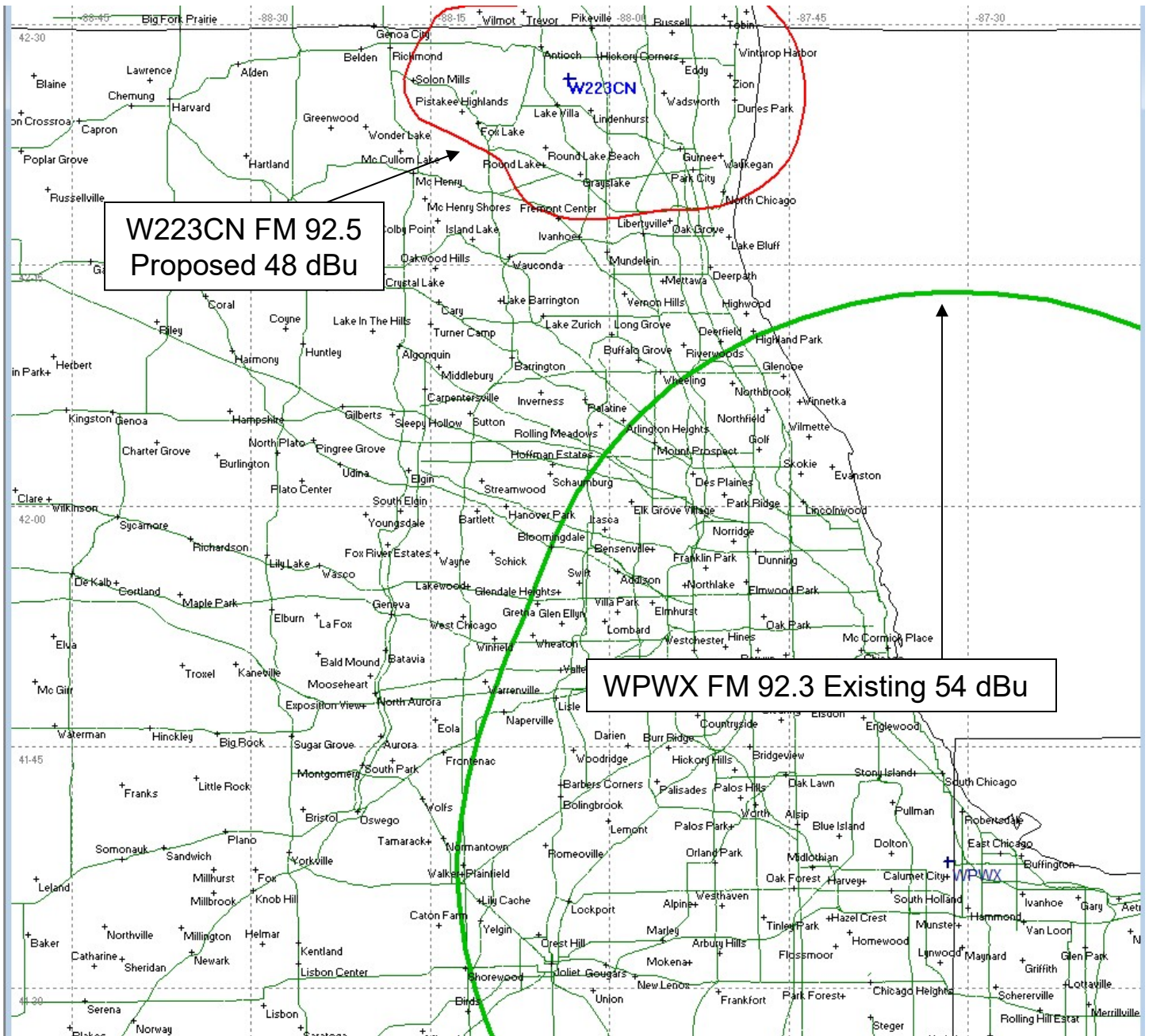
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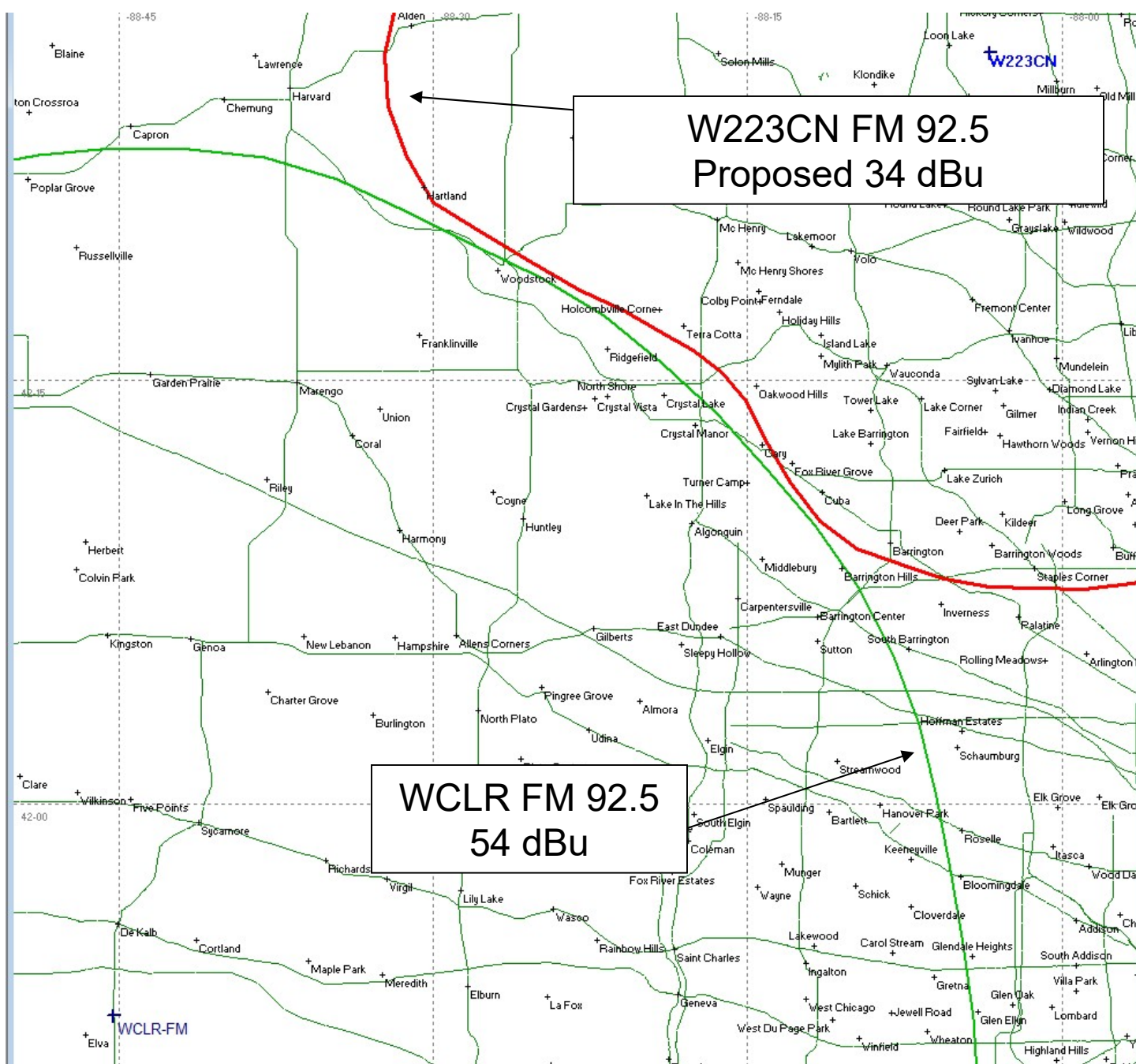
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Exhibit 4

W223CN Proposed 48 dBu – First Adjacent WPWX Licensed 54 dBu



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Exhibit 5
Proposed W223CN 34 dbu and Co Channel WCLR 54 dBu Contour



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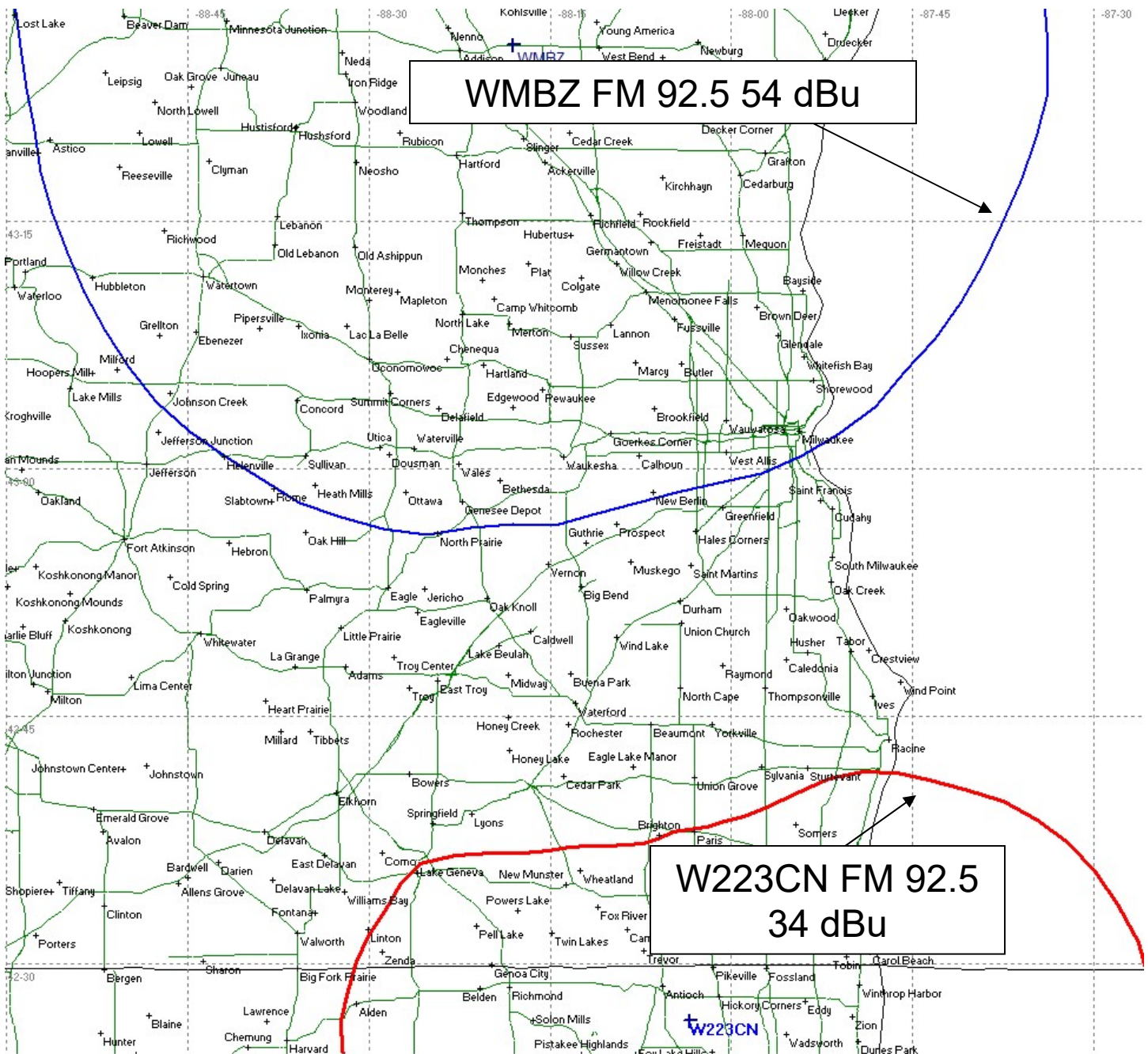
W223CN Zion, Illinois

Facility ID 142464 92.5 FM .250 kW

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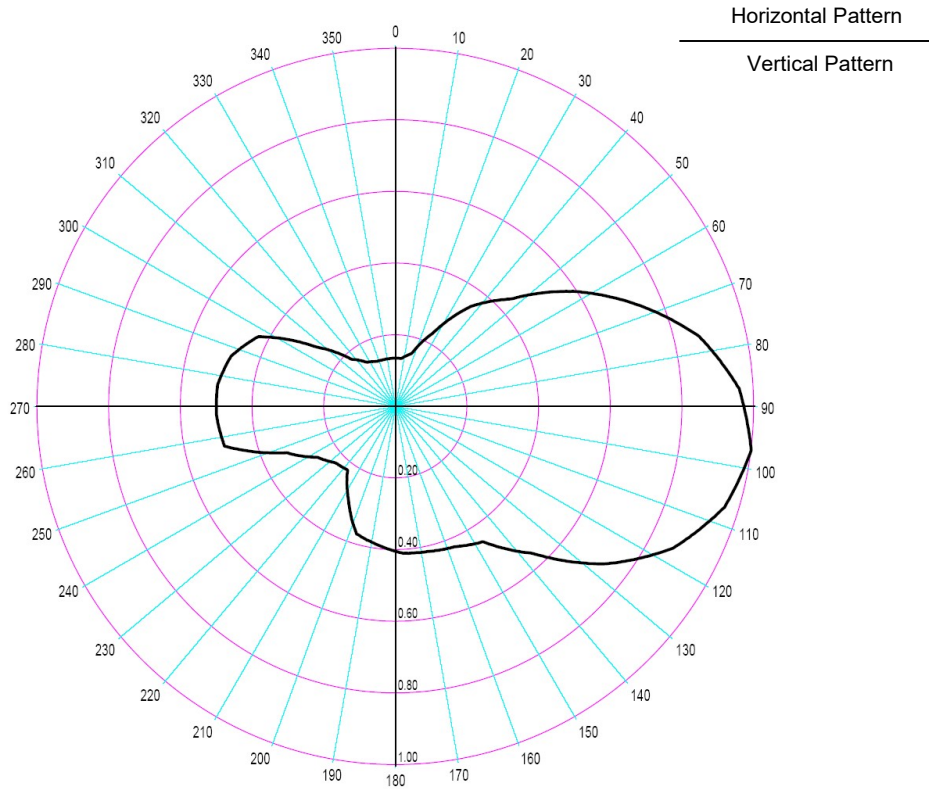
Exhibit 6

W223CN 34 dBu And Co Channel WMBZ 54 dBu Contour



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Exhibit 7

IRTE P3AC 1R Directional Pattern



| Azim | Rel.FS | ERP [W] | dBk | Azim | Rel.FS | ERP [W] | dBk | Azim | Rel.FS | ERP [W] | dBk | Azim | Rel.FS | ERP [W] | dBk |
|------|--------|---------|---------|-------|--------|---------|---------|-------|--------|---------|---------|-------|--------|---------|---------|
| 0.0 | 0.135 | 4.557 | -23.413 | 90.0 | 0.972 | 236.258 | -6.266 | 180.0 | 0.404 | 40.815 | -13.892 | 270.0 | 0.500 | 62.517 | -12.040 |
| 5.0 | 0.135 | 4.557 | -23.413 | 95.0 | 0.992 | 246.081 | -6.089 | 185.0 | 0.394 | 38.819 | -14.110 | 275.0 | 0.500 | 62.517 | -12.040 |
| 10.0 | 0.141 | 4.972 | -23.035 | 100.0 | 0.988 | 244.100 | -6.124 | 190.0 | 0.384 | 36.874 | -14.333 | 280.0 | 0.494 | 61.025 | -12.145 |
| 15.0 | 0.151 | 5.702 | -22.440 | 105.0 | 0.968 | 234.318 | -6.302 | 195.0 | 0.375 | 35.166 | -14.539 | 285.0 | 0.484 | 58.579 | -12.323 |
| 20.0 | 0.177 | 7.834 | -21.060 | 110.0 | 0.933 | 217.680 | -6.622 | 200.0 | 0.347 | 30.110 | -15.213 | 290.0 | 0.465 | 54.071 | -12.670 |
| 25.0 | 0.215 | 11.559 | -19.371 | 115.0 | 0.888 | 197.188 | -7.051 | 205.0 | 0.306 | 23.415 | -16.305 | 295.0 | 0.440 | 48.413 | -13.150 |
| 30.0 | 0.266 | 17.694 | -17.522 | 120.0 | 0.828 | 171.441 | -7.659 | 210.0 | 0.269 | 18.095 | -17.424 | 300.0 | 0.383 | 36.682 | -14.355 |
| 35.0 | 0.326 | 26.576 | -15.755 | 125.0 | 0.758 | 143.679 | -8.426 | 215.0 | 0.235 | 13.810 | -18.598 | 305.0 | 0.306 | 23.415 | -16.305 |
| 40.0 | 0.377 | 35.542 | -14.493 | 130.0 | 0.679 | 115.291 | -9.382 | 220.0 | 0.224 | 12.547 | -19.014 | 310.0 | 0.247 | 15.256 | -18.166 |
| 45.0 | 0.422 | 44.533 | -13.513 | 135.0 | 0.594 | 88.232 | -10.544 | 225.0 | 0.228 | 12.999 | -18.861 | 315.0 | 0.200 | 10.003 | -19.999 |
| 50.0 | 0.485 | 58.822 | -12.305 | 140.0 | 0.527 | 69.451 | -11.583 | 230.0 | 0.239 | 14.284 | -18.451 | 320.0 | 0.171 | 7.312 | -21.360 |
| 55.0 | 0.560 | 78.421 | -11.056 | 145.0 | 0.472 | 55.711 | -12.541 | 235.0 | 0.254 | 16.133 | -17.923 | 325.0 | 0.154 | 5.931 | -22.269 |
| 60.0 | 0.632 | 99.882 | -10.005 | 150.0 | 0.442 | 48.854 | -13.111 | 240.0 | 0.281 | 19.745 | -17.045 | 330.0 | 0.144 | 5.185 | -22.852 |
| 65.0 | 0.702 | 123.234 | -9.093 | 155.0 | 0.430 | 46.237 | -13.350 | 245.0 | 0.316 | 24.971 | -16.026 | 335.0 | 0.139 | 4.832 | -23.159 |
| 70.0 | 0.772 | 149.035 | -8.267 | 160.0 | 0.422 | 44.533 | -13.513 | 250.0 | 0.378 | 35.730 | -14.470 | 340.0 | 0.136 | 4.625 | -23.349 |
| 75.0 | 0.842 | 177.288 | -7.513 | 165.0 | 0.417 | 43.484 | -13.617 | 255.0 | 0.458 | 52.455 | -12.802 | 345.0 | 0.135 | 4.557 | -23.413 |
| 80.0 | 0.897 | 201.205 | -6.964 | 170.0 | 0.413 | 42.654 | -13.700 | 260.0 | 0.493 | 60.778 | -12.163 | 350.0 | 0.135 | 4.557 | -23.413 |
| 85.0 | 0.942 | 221.900 | -6.538 | 175.0 | 0.411 | 42.241 | -13.743 | 265.0 | 0.498 | 62.017 | -12.075 | 355.0 | 0.135 | 4.557 | -23.413 |

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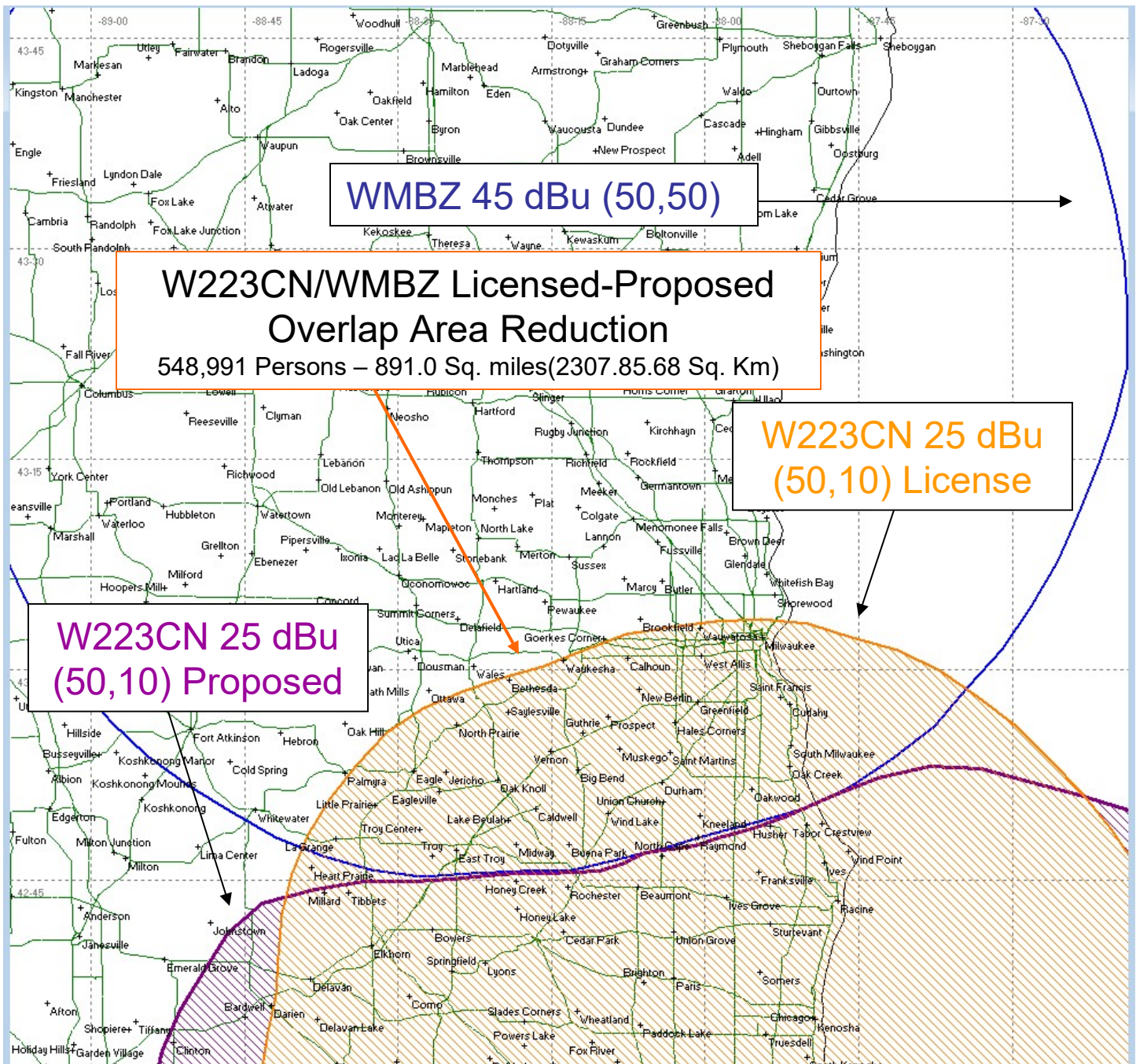
FCC Form 349-Instant Application

Exhibit 8

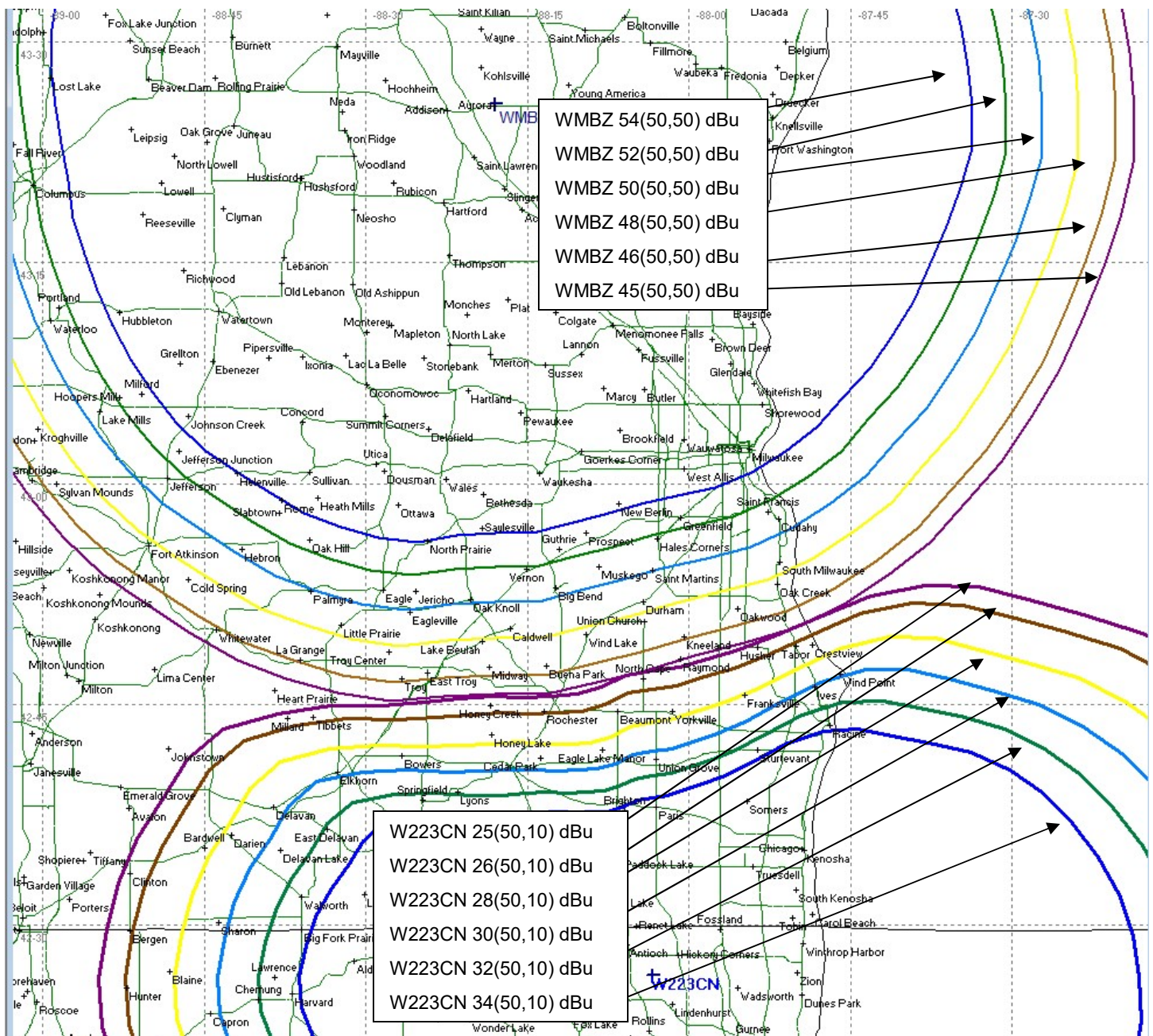
W223CN 25 dBu(50,10)License, W223CN Proposed 25 dBu(50,10)

Co Channel WMBZ 45 DBU(50,50) Contour

Proposed Overlap Reduction Area



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Exhibit 9
Co Channel WMBZ Contours/Persons/Letters**



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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- Pass |
| 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- Pass |
| 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- Pass |
| 10a) 42-50-32.7 N 88-04-45.2 W- Pass | 28b) 42-49-50.3 N 87-57-23.8 W-Pass |
| 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- Pass | 30a) 42-49-57.0 N 88-43-04.5 W- Pass |
| 12a) 42-51-58.8 N 87-54-24.2 W- Pass | 31a) 42-49-44.4 N 87-54-51.4 W- Pass |
| 13a) 42-56-05.9 N 87-59-23.3 W- Pass | 32a) 42-52-18.9 N 87-54-46.0 W- Pass |
| 14a) 42-52-29.0 N 87-57-51.5 W- Pass | 33a) 42-48-46.0 N 87-57-11.0 W- Pass |
| 15a) 42-54-03.5 N 88-08-27.0 W- Pass | 34a) 42-58-57.9 N 87-57-10.5 W- Pass |
| 16a) 42-53-17.8 N 88-14-51.5 W- Pass | 35a) 42-49-06.0 N 87-57-10.1 W- Pass |
| 17a) 42-56-22.3 N 87-58-59.9 W- Pass | 36a) 42-50-18.2 N 87-50-53.1 W- Pass |
| 18a) 42-46-14.3 N 88-14-09.1 W- Pass | 37a) 42-50-33.0 N 87-51-10.5 W- Pass |
| 19a) 42-46-23.5 N 88-11-37.5 W- Pass | 38a) 42-50-58.6 N 87-51-12.4 W- Pass |

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Exhibit 9c-Continued
Co Channel WMBZ Contours//Letters/ Pass Fail -20 dbu U/D**

WMBZ Listener Data:

39a) 42-49-43.4 N 87-53-40.4 W-**Pass**
40a) 42-51-51.1 N 87-51-21.9 W-**Pass**
41a) 42-50-37.0 N 87-53-47.4 W-**Pass**
42a) 42-51-18.0 N 87-51-12.5 W-**Pass**
43a) 42-51-33.7 N 87-51-12.6 W-**Pass**
44a) 42-50-58.7 N 87-51-27.9 W-**Pass**
45a) 42-52-07.4 N 87-51-27.2 W-**Pass**
46a) 42-51-40.2 N 87-51-15.7 W-**Pass**
47a) 42-51-03.4 N 87-51-12.3 W-**Pass**
48a) 42-50-32.7 N 87-51-53.0 W-**Pass**
49a) 42-51-59.0 N 87-51-25.2 W-**Pass**
50a) 42-50-59.1 N 87-51-56.4 W-**Pass**
51a) 42-49-44.4 N 87-54-51.4 W-**Pass**
52a) 42-50-59.0 N 87-51-51.6 W-**Pass**
53a) 42-50-32.7 N 87-51-52.0 W-**Pass**
54a) 42-51-25.4 N 87-52-02.8 W-**Pass**
55a) 42-51-00.1 N 87-53-37.2 W-**Pass**

0(Zero) 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.

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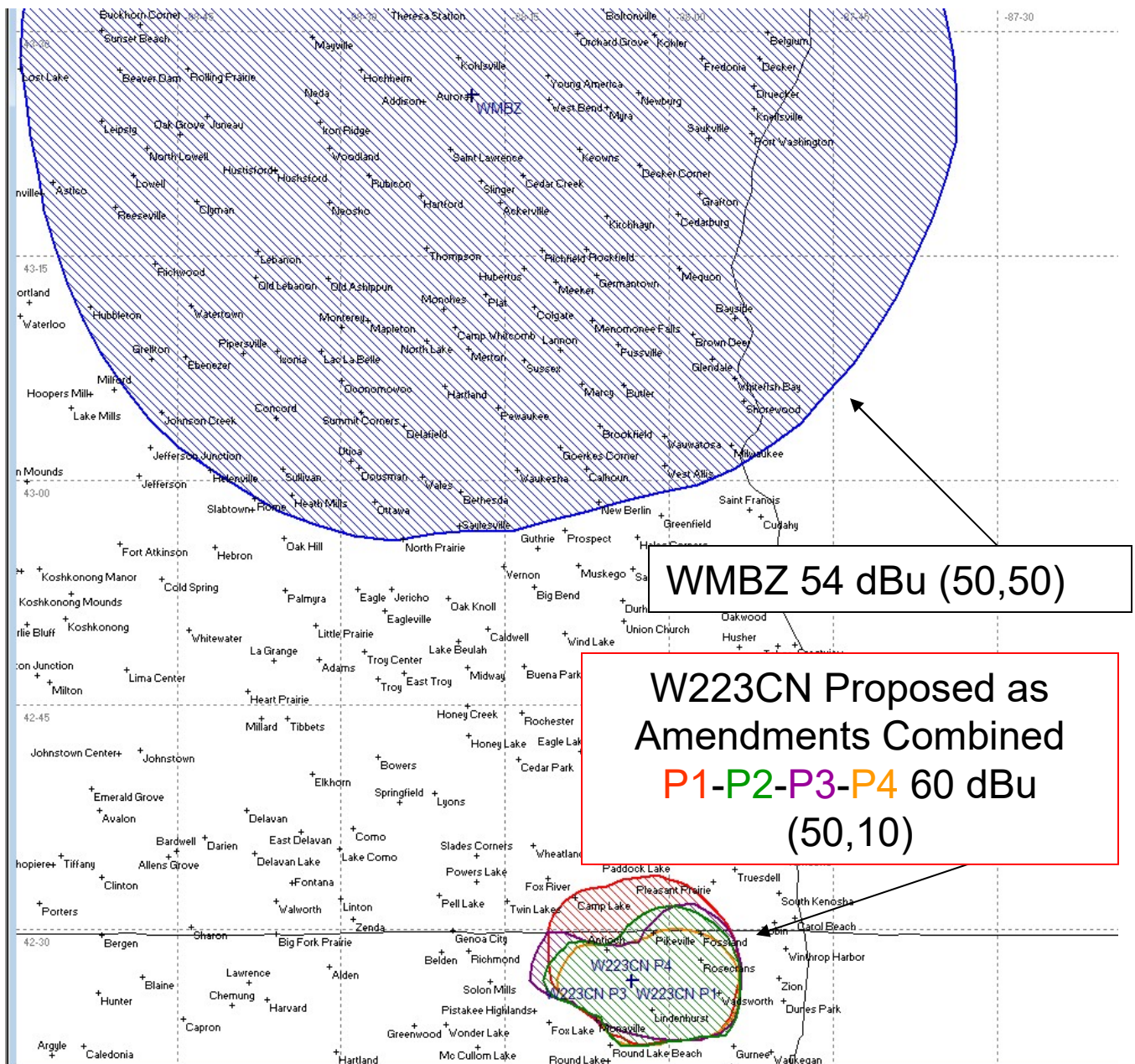
FCC Form 349-Instant Application

Exhibit 10

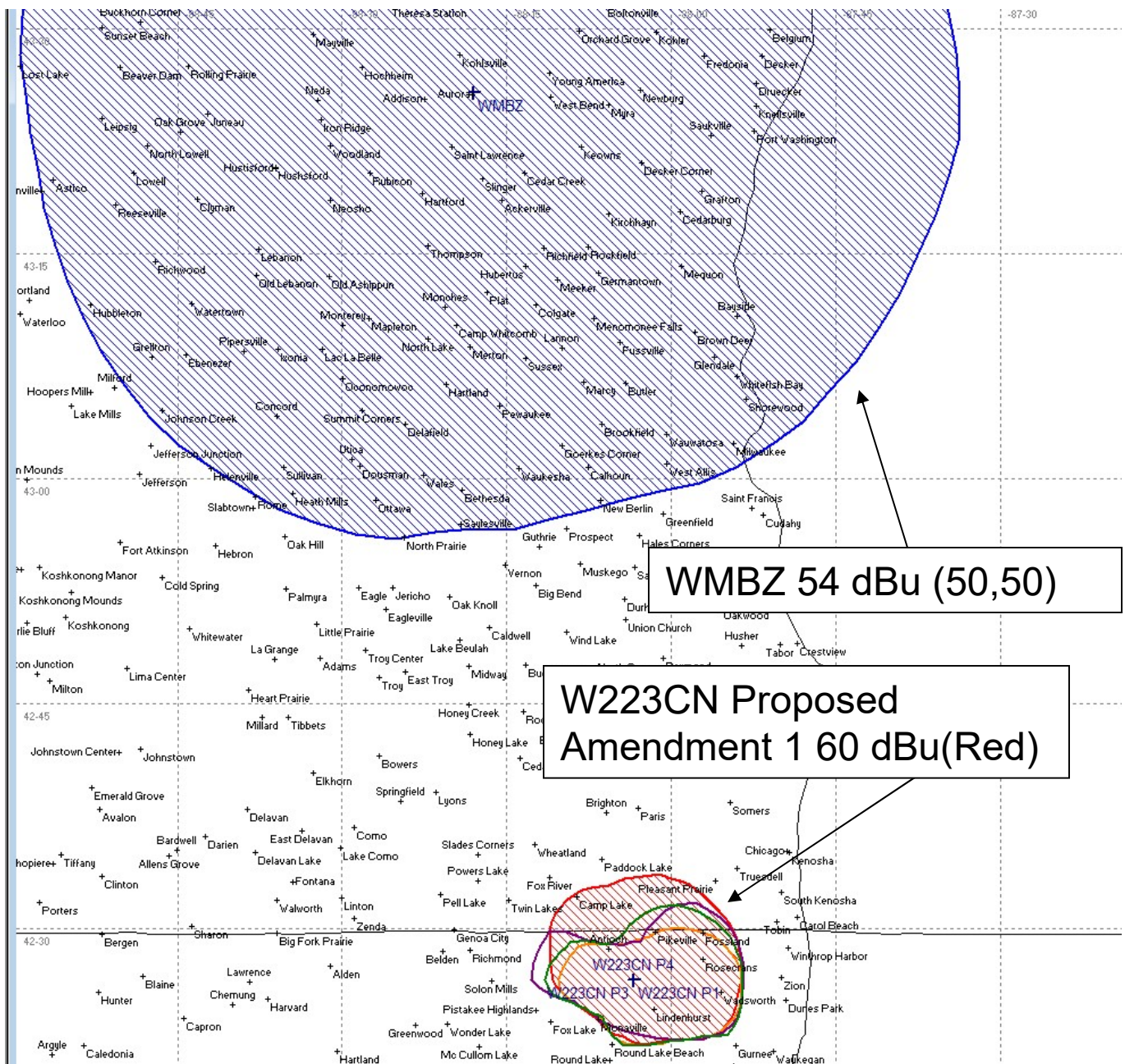
W223CN Proposed 60 dBu(50,50)

Co Channel WMBZ 54 DBU(50,50) Contour

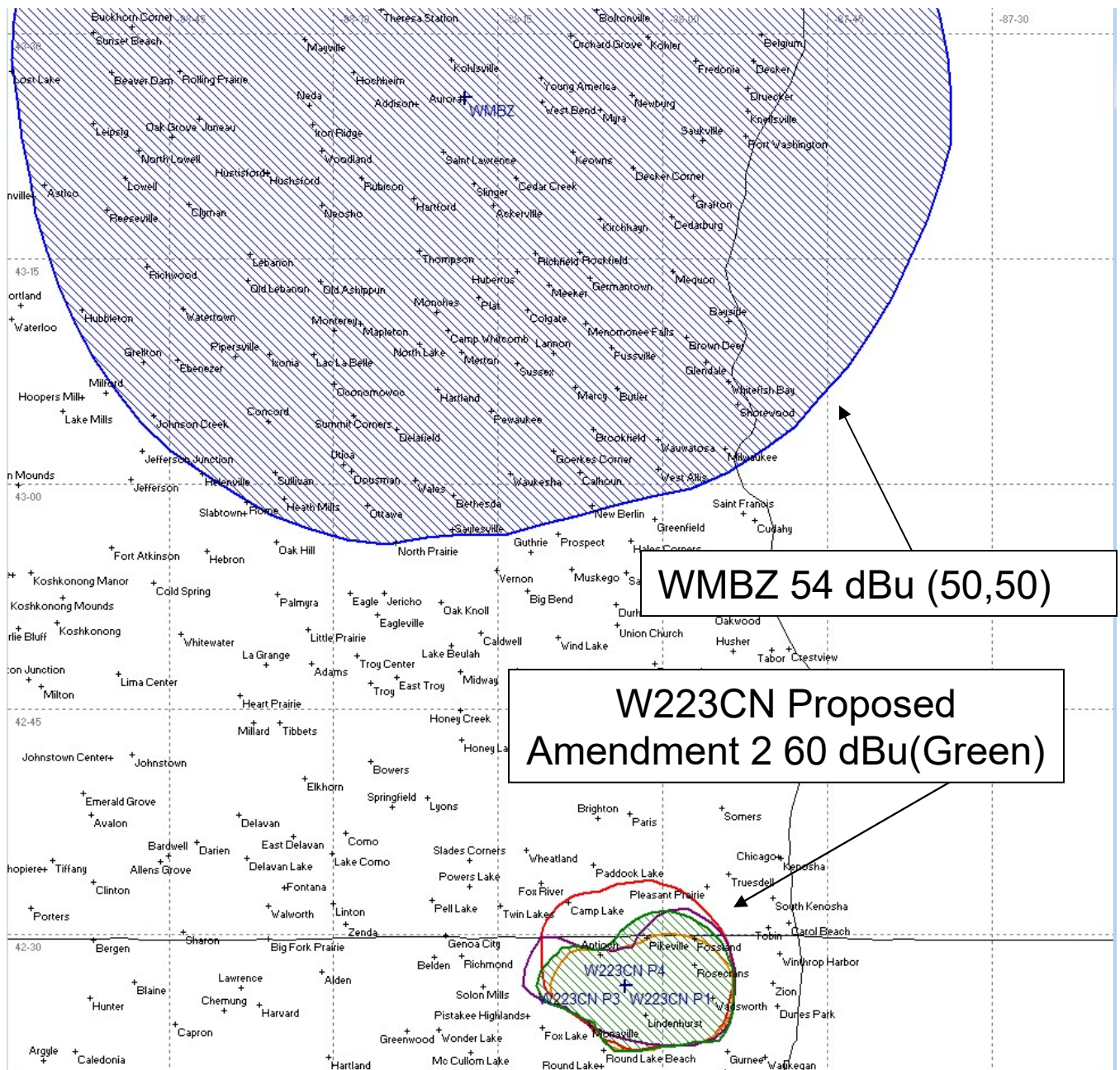
Proposed Overlap Reduction Area amended P1-P2-P3-P4 Combined



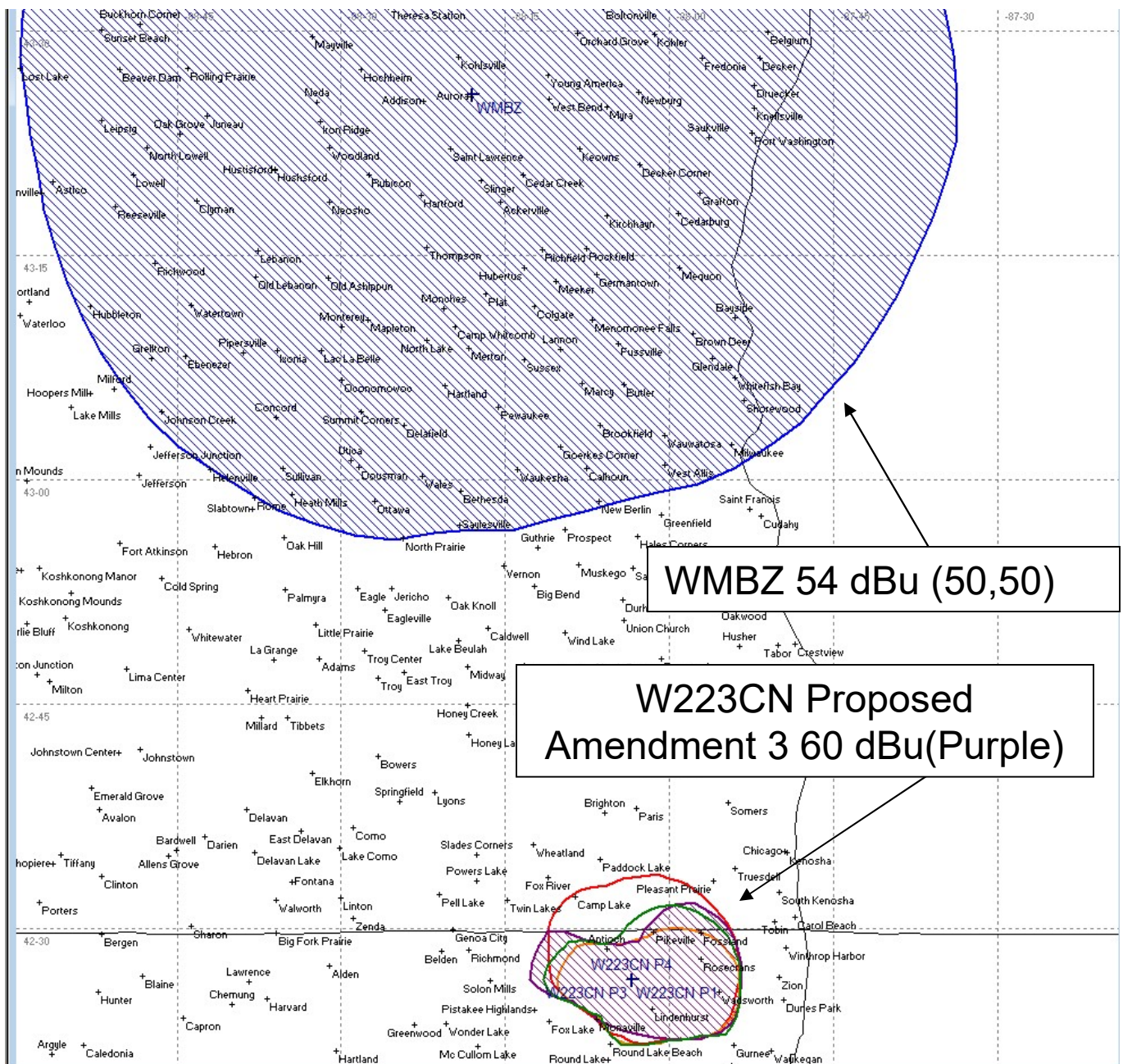
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Exhibit 10B
W223CN Proposed 60 dBu(50,50)
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Proposed Overlap Reduction Area Amendment 1



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Exhibit 10C
W223CN Proposed 60 dBu(50,50)
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Proposed Overlap Reduction Area Amendment 2



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Proposed Overlap Reduction Area Amendment 3



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Exhibit 10D
W223CN Proposed 60 dBu(50,50)
Co Channel WMBZ 54 DBU(50,50) Contour
Proposed Overlap Reduction Area Amendment 4

