

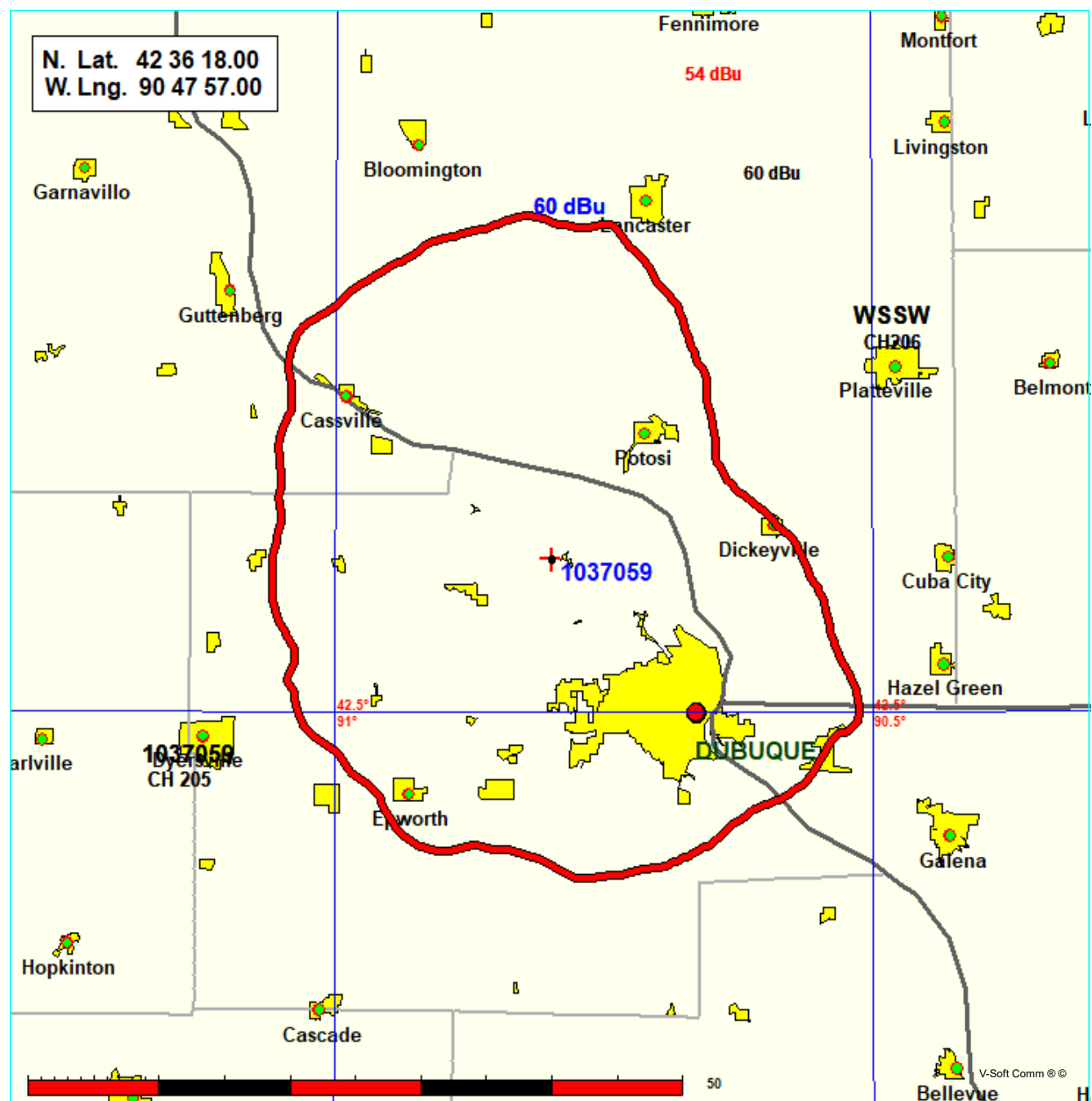
Purpose

The purpose of this minor modification to Vanguard Association of Sunbelt College's Dubuque construction permit (Facility ID 768573, File # 0000167716) is to move the antenna location lower on the tower to an open space. Crown Castle's representative gave incorrect information about open space on the tower during the initial application process. The ERP is also reduced and the directional antenna pattern is changed. The community of license is unchanged.

Dubuque, IA 205A (768573)
Vanguard Association of Sunbelt Colleges

Coverage Study - GLOBE 30 Sec
07-12-2023

1037059 CH205 A , 1.12 kW, 166.1m HAAT, 425.9m COR AMSL
Service Contour = 60 dBu.



Dubuque, IA 205A (768573)
 Vanguard Association of Sunbelt Colleges
 CH# 205A - 88.9 MHz, Pwr= 1.12 kW DA, HAAT= 166.1 M, COR= 425.9 M
 Average Protected F(50-50)= 24.28 km
 Standard Directional

REFERENCE
 42 36 18.00 N.
 90 47 57.00 W.

DISPLAY DATES
 DATA 07-10-23
 SEARCH 07-12-23

| CH CITY | CALL | TYPE STATE | ANT | AZI <-- | DI ST FILE # | LAT LNG | PWR(kW) HAAT(M) | INT(km) COR(M) | PRO(km) LICENSEE | *IN* (Overlap in km) | *OUT* |
|---------------------|--------|---------------|-----|----------------|---------------------------|----------------------------|--------------------|-------------------|------------------------------------|-------------------------|--------|
| 205A Epworth | 766325 | APP _CN IA | | 208.2 28.1 | 20.84 0000166936 | 42 26 23.00 90 55 09.20 | 4.600 83 | 85.2 388 | 28.5 Augustana College | -88.1* | -79.1* |
| 205C3 Waverly | KWVI | LIC DVN IA | | 280.4 99.4 | 119.46 BLED20060417AFI | 42 47 20.90 92 14 22.60 | 20.000 84 | 98.0 400 | 29.2 American Family Associatio | 0.1 | 22.3 |
| 206A Platteville | WSSW | LIC _CN WI | | 61.1 241.3 | 36.70 BLED20151112XPE | 42 45 50.60 90 24 20.10 | 0.130 132 | 21.1 440 | 14.0 State Of Wisconsin - Educa | 0.1 | 0.2 |
| 203A Dubuque | KIAD | LIC DVN IA | | 139.8 320.0 | 29.14 BLED20060424ADO | 42 24 16.00 90 34 12.50 | 0.750 158 | 1.6 435 | 20.3 American Family Associatio | 2.8 | 5.9 |
| 205C2 La Crosse | WLSU | LIC DCN WI | | 341.1 160.7 | 141.16 BLED20190313AAD | 43 48 18.30 91 22 05.10 | 8.200 283 | 103.0 546 | 39.8 Board Of Regents Of The Un | 13.3 | 24.6 |
| 204B Madison | WERN | LIC DCN WI | | 63.6 244.5 | 114.60 BLED19951026KA | 43 03 20.90 89 32 06.40 | 20.500 385 | 76.7 686 | 51.7 State Of Wisconsin - Educa | 21.3 | 40.4 |
| 204C3 Coggon | KMMK | CP DVN IA | | 238.8 58.3 | 71.21 0000202037 | 42 16 14.00 91 32 22.00 | 19.500 107 | 23.2 396 | 15.5 Plus Charities | 25.4 | 21.7 |
| 204C3 Coggon | KMMK | LIC DVN IA | | 238.8 58.3 | 71.21 BLED20180326ACG | 42 16 14.00 91 32 22.00 | 25.000 94 | 22.6 382 | 15.1 Plus Charities | 26.0 | 22.1 |
| 206A Postville | KPVL | LIC DCN IA | | 311.0 130.5 | 82.41 BLED20090504AHB | 43 05 19.90 91 33 54.50 | 3.000 75 | 29.5 408 | 20.1 Community Public Media | 27.3 | 23.5 |
| 205C2 Wapello | KAI P | LIC _EN IA | | 190.5 10.2 | 171.99 BLED20050916ABU | 41 04 59.10 91 10 18.50 | 13.500 146 | 111.9 356 | 43.4 Educational Media Foundati | 36.8 | 60.1 |
| 206A Hiawatha | KXGM | LIC _CN IA | | 228.8 48.2 | 96.00 BLED20131112ANO | 42 01 57.00 91 40 24.60 | 3.600 94 | 31.9 339 | 21.6 Educational Media Foundati | 41.6 | 41.6 |
| 206B1 Freeport | WNIE | LIC DCN IL | | 107.8 288.6 | 104.06 BLED19990528KA | 42 18 45.10 89 35 38.40 | 6.000 110 | 28.3 368 | 19.5 Northern Illinois Universi | 49.3 | 49.8 |

Terrain database is GLOBE 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 In & Out distances between contours are shown at closest points. Reference zone= - ZN2, Co to 3rd adjacent.
 All separation margins (if shown) include rounding.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 « = Station meets FCC minimum distance spacing for its class.

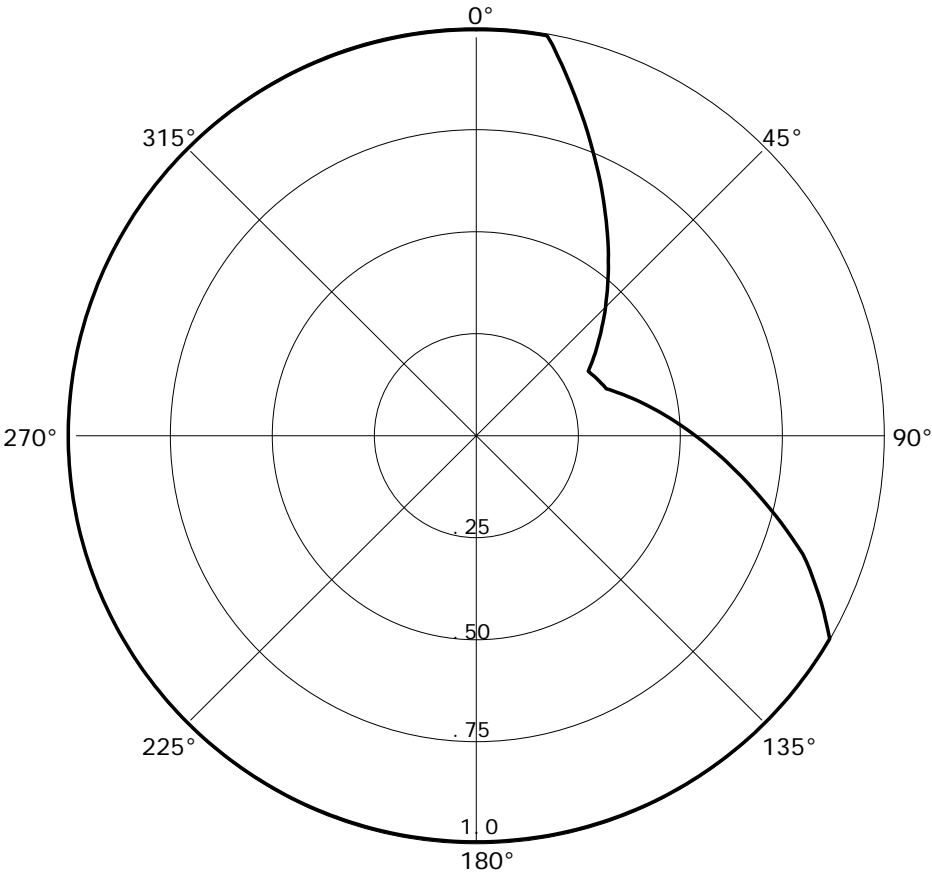
1037059

07-12-2023

RMS(V) = .901

Graph is Relative Field

| Azi | Field | dBk | kW |
|-----|-------|---------|-------|
| 000 | 1.000 | 00.492 | 1.120 |
| 010 | 1.000 | 00.492 | 1.120 |
| 020 | 0.796 | -01.490 | 0.710 |
| 030 | 0.632 | -03.493 | 0.447 |
| 040 | 0.502 | -05.494 | 0.282 |
| 050 | 0.399 | -07.488 | 0.178 |
| 060 | 0.317 | -09.487 | 0.113 |
| 070 | 0.339 | -08.904 | 0.129 |
| 080 | 0.427 | -06.899 | 0.204 |
| 090 | 0.537 | -04.908 | 0.323 |
| 100 | 0.676 | -02.909 | 0.512 |
| 110 | 0.852 | -00.899 | 0.813 |
| 120 | 1.000 | 00.492 | 1.120 |
| 130 | 1.000 | 00.492 | 1.120 |
| 140 | 1.000 | 00.492 | 1.120 |
| 150 | 1.000 | 00.492 | 1.120 |
| 160 | 1.000 | 00.492 | 1.120 |
| 170 | 1.000 | 00.492 | 1.120 |
| 180 | 1.000 | 00.492 | 1.120 |
| 190 | 1.000 | 00.492 | 1.120 |
| 200 | 1.000 | 00.492 | 1.120 |
| 210 | 1.000 | 00.492 | 1.120 |
| 220 | 1.000 | 00.492 | 1.120 |
| 230 | 1.000 | 00.492 | 1.120 |
| 240 | 1.000 | 00.492 | 1.120 |
| 250 | 1.000 | 00.492 | 1.120 |
| 260 | 1.000 | 00.492 | 1.120 |
| 270 | 1.000 | 00.492 | 1.120 |
| 280 | 1.000 | 00.492 | 1.120 |
| 290 | 1.000 | 00.492 | 1.120 |
| 300 | 1.000 | 00.492 | 1.120 |
| 310 | 1.000 | 00.492 | 1.120 |
| 320 | 1.000 | 00.492 | 1.120 |
| 330 | 1.000 | 00.492 | 1.120 |
| 340 | 1.000 | 00.492 | 1.120 |
| 350 | 1.000 | 00.492 | 1.120 |

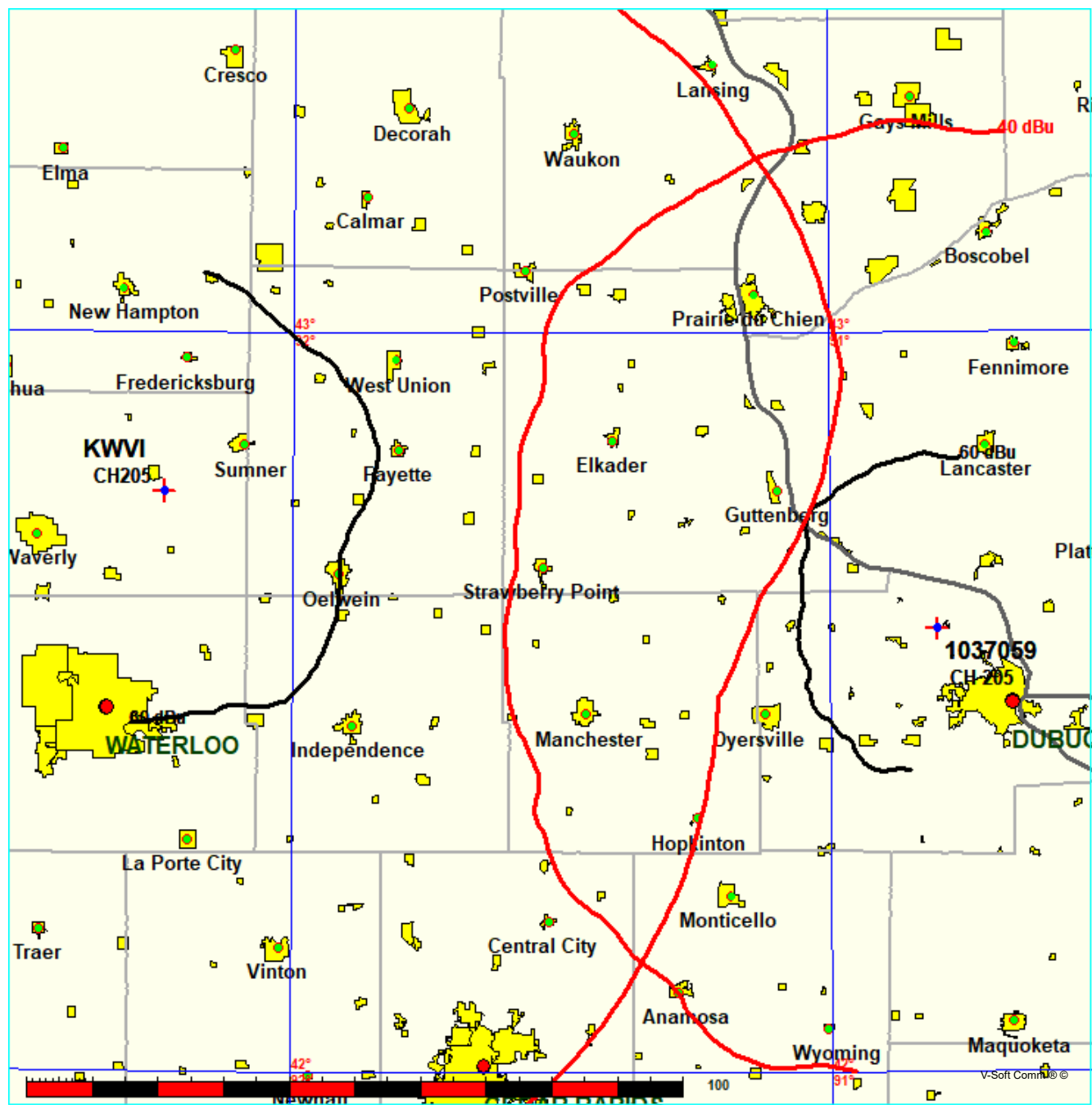


Dubuque, IA 205A (768573)
Vanguard Association of Sunbelt Colleges

FMCommander Single Allocation Study - 07-12-2023 - GLOBE 30 Sec
1037059's Overlaps (In= 0.08 km, Out= 22.33 km)

1037059 CH 205 A DA
Lat= 42 36 18.00, Lng= 90 47 57.00
1.12 kW 166.1 m HAAT, 425.9 m COR
Prot.= 60 dBu, Intef.= 40 dBu

KWVI CH 205 C3 DA BLED20060417AFI
Lat= 42 47 20.90, Lng= 92 14 22.60
20.0 kW 83.5 m HAAT, 400 m COR
Prot.= 60 dBu, Intef.= 40 dBu

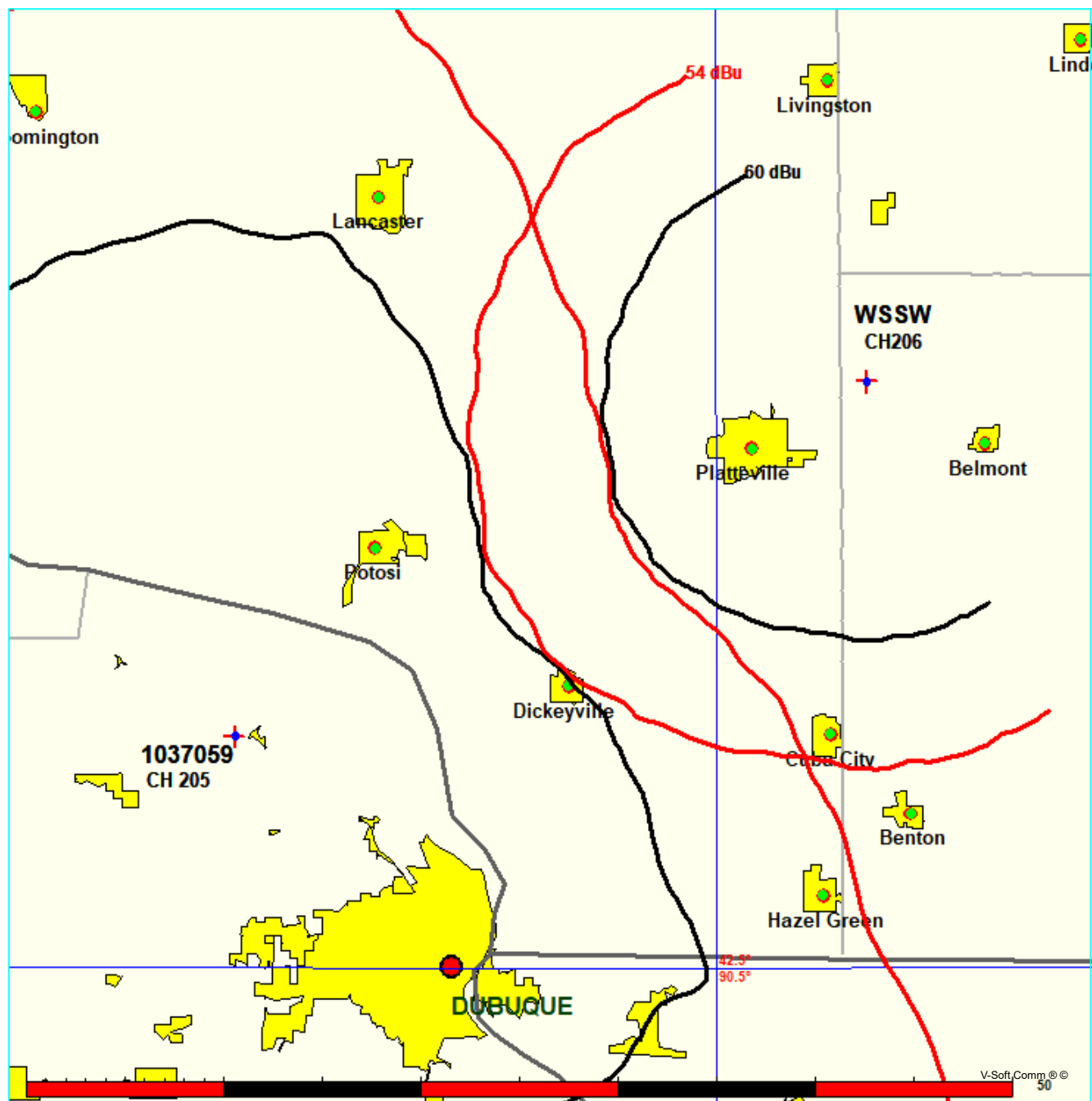


Dubuque, IA 205A (768573)
Vanguard Association of Sunbelt Colleges

FMCommander Single Allocation Study - 07-12-2023 - GLOBE 30 Sec
1037059's Overlaps (In= 0.12 km, Out= 0.18 km)

1037059 CH 205 A DA
Lat= 42 36 18.00, Lng= 90 47 57.00
1.12 kW 166.1 m HAAT, 425.9 m COR
Prot.= 60 dBu, Intef.= 54 dBu

WSSW CH 206 A BLED20151112XPE
Lat= 42 45 50.60, Lng= 90 24 20.10
0.13 kW 131.5 m HAAT, 440 m COR
Prot.= 60 dBu, Intef.= 54 dBu



The potential for human exposure to non-ionizing radiofrequency radiation at the proposed transmitter site has been evaluated. There is one other known broadcast facility within 315 meters of the proposed antenna site for the proposed station serving Dubuque, IA, KNSY.

The second page of this exhibit shows the output of FMModel with the information for the currently licensed KNSY antenna. It shows that KNSY produces maximal radiation of $15.9 \frac{\mu W}{cm^2}$.

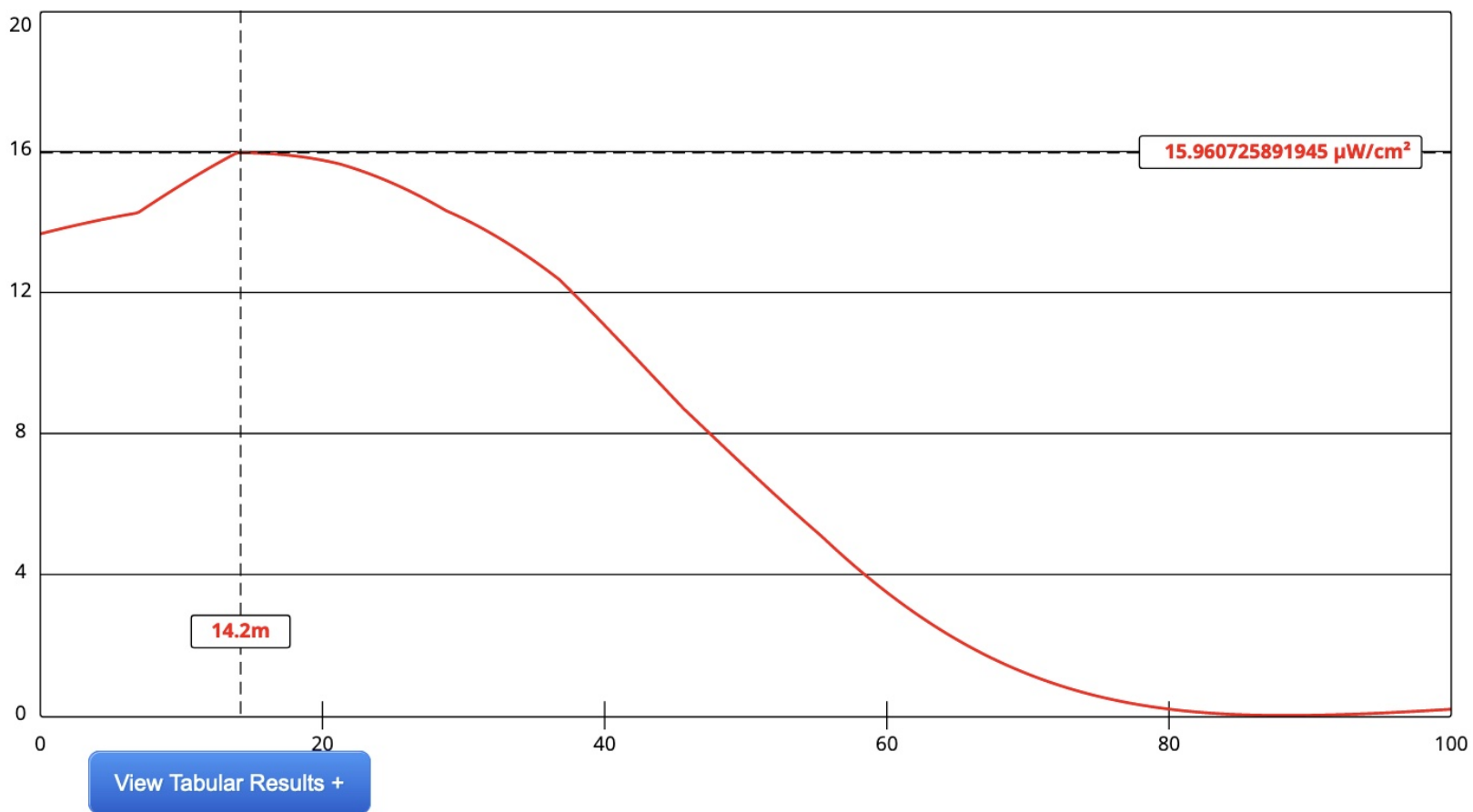
The new facility will operate on 88.9 MHz with a maximum effective radiated power (ERP) of 1.12 kW in both Horizontal and Vertical. The facility will operate with a single element directional antenna mounted 57.9 meters above ground level (AGL). For purposes of this study, a worst case single bay, EPA Type 1 element as defined from FCC program FM Model Version has been assumed

The result of the evaluation with FMModel¹ for this proposed station is included on the last page of this exhibit. It shows that the maximum potential exposure from this proposed station will be $14.4 \frac{\mu W}{cm^2}$ at a distance of approximately 15 meters from the tower site. This combined with the radiation produced by KNSY is less than the $200 \frac{\mu W}{cm^2}$ that is acceptable for exposure to the general public.

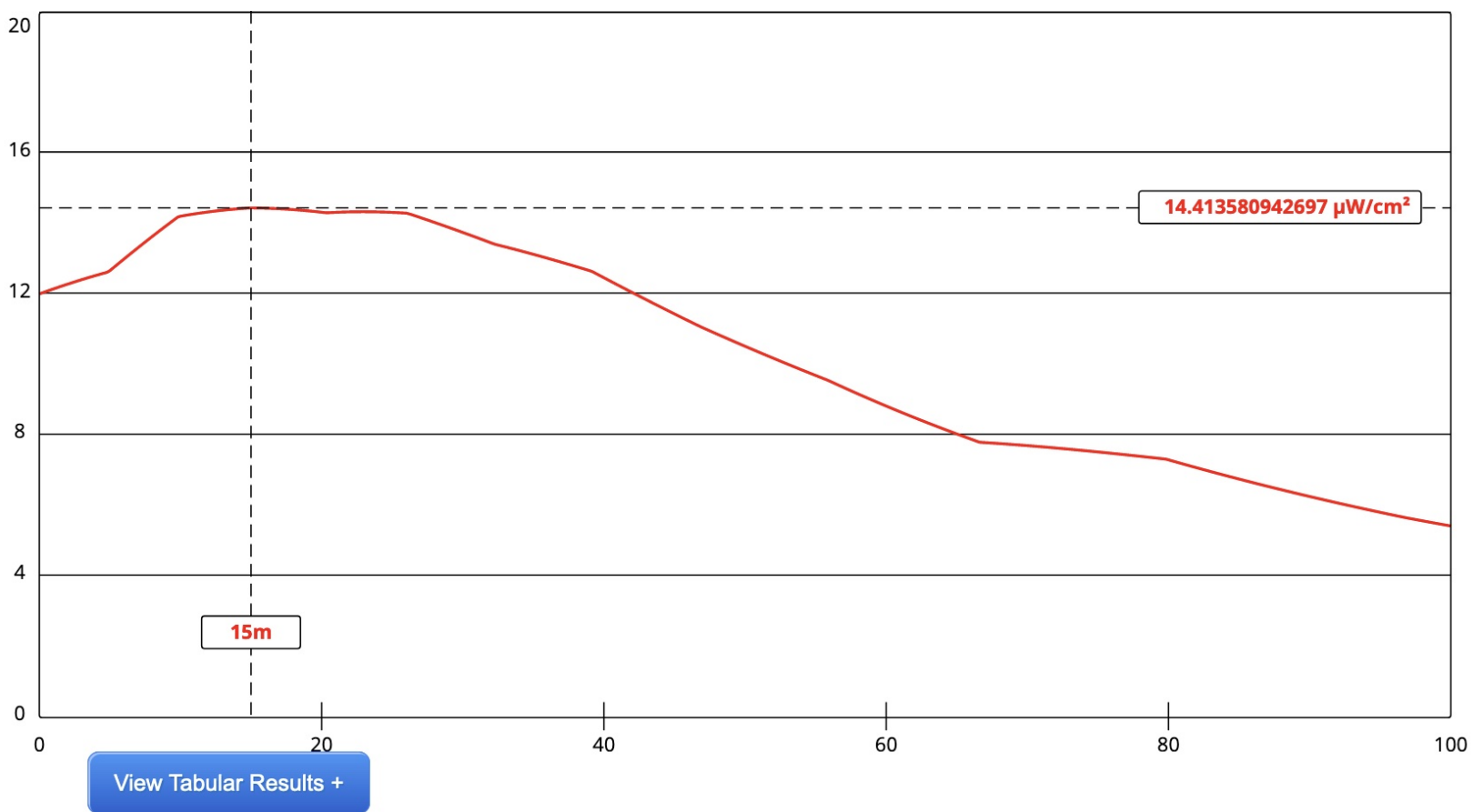
In addition to the protection afforded by the proposed antenna heights above ground, the facility is properly marked with signs, and entry to the facility is restricted by means of fencing with locked doors and/or gates. Any other means that may be required to protect employees and the general public will be employed.

In the event work is required in proximity to the antenna(s) such that the person or persons working in the area will be potentially exposed to fields in excess of the current guidelines, applicant will cause their proposed transmitter to reduce power, or cease operation during the critical period.

¹<https://www.fcc.gov/general/fm-model>



| | | | |
|-------------------|--|--------------------------------------|-----------------------------------|
| Channel Selection | Channel 209 (89.7 MHz) ▾ | | |
| Antenna Type + | EPA Type 1: Ring-and-Stub or "Other" ▾ | | |
| Height (m) | <input type="text" value="81"/> | Distance (m) | <input type="text" value="100"/> |
| ERP-H (W) | <input type="text" value="610"/> | ERP-V (W) | <input type="text" value="3000"/> |
| Num of Elements | <input type="text" value="3"/> | λ | <input type="text" value="1"/> |
| Num of Points | <input type="text" value="500"/> | <input type="button" value="Apply"/> | |



| | | | |
|-------------------|--|--------------|-----------------------------------|
| Channel Selection | Channel 205 (88.9 MHz) ▾ | | |
| Antenna Type + | EPA Type 1: Ring-and-Stub or "Other" ▾ | | |
| Height (m) | <input type="text" value="57.9"/> | Distance (m) | <input type="text" value="100"/> |
| ERP-H (W) | <input type="text" value="1120"/> | ERP-V (W) | <input type="text" value="1120"/> |
| Num of Elements | <input type="text" value="1"/> | λ | <input type="text" value="1"/> |
| Num of Points | <input type="text" value="500"/> | Apply | |

| | | |
|---------------|----------------------------------|-------|
| Num of Points | <input type="text" value="500"/> | Apply |
|---------------|----------------------------------|-------|