

## Minor Modification of Facility W295DE; BLFT-20180827AAW Facility ID No. 147802

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This exhibit is for minor modification of translator permit for W295DE Facility ID No. 147802, BLFT-20180827AAW. This application is to “clear space” of the existing support tower at the request of the tower owner, by moving to a higher location on the same tower. We propose to move the existing directional antenna up from the present 155 meters above ground level (“AGL”) to 188 meters AGL with a reduction in power from 195 to 146 watts to keep the interference contours within those of the present facility. There is no change in directional pattern, antenna type or make, nor of channel, being requested.

### **Antenna Location**

The antenna is to be mounted 33 meters above its present position on an existing tower identified by registration number 1012090 at 188 meters above ground. A directional antenna is used, the pattern is given in **Figure 0**. Below as **Figure 1** is an overlap and spacing study from which it can be determined that this proposal is within the protected contour of **second** adjacent channel full-power stations WHLK, and WNWV.

### **73.1204 Compliance**

We will demonstrate that a lack of population and/or other factors allow this proposal to be compliant with 74.1204. The process commonly called “Living Way”, allows for the use of D/U Analysis, also known as “signal strength ratio methodology” to be utilized to demonstrate compliance. In this instant case the facility to be protected is on a second or third adjacent channel and is to be afforded protection from signals 40 dB stronger than the protected facility presents near the proposed translator antenna location.

**Concerning WNWV;** In **Figure 2** a map showing that the predicted 73.7 dBu signal contour of the protected station falls 500 meters beyond the proposed translator antenna location is given. This proposal can only cause predicted interference to the protected facility by having a signal exceeding 113.7 dBu ( $73.7 + 40$ ) in a habitable/populated area. Utilizing the line of sight equation considering the proposed antenna vertical pattern as shown in **Figure 3**, it has been determined that a 113.7 dBu signal developed by 195 watts, as proposed, will not reach habitable areas. With examination of the image in **Figure 4** it can be determined that no habitable space extends into the confines of the interference signal level contour area.

**Concerning WHLK;** In **Figure 1** it can be seen that WHLK and the proposal are co-located. WHLK will have a signal of over 154 dBu in the vicinity of the tower. As this is a signal of greater value than that of WNWV, protection of the stronger WHLK signal is assured by the protection of the weaker WNWV signal.

Thus the provisions of the rules section concerning prohibited overlap will not apply as it has been demonstrated that no actual interference will occur due to a lack of population and other factors as applied in this instant proposal.

### **Request for Waiver of 47 CFR § 74.1235(d)(3)**

The proposed 34 dBu F(50,10) interfering contour extends north of the US-Canada border within Lake Ontario, and exceeds the 60 km distance limit specified in 47 CFR § 74.1235(d)(3), but it clears all Canadian soil by at least 8 kilometers; therefore, the proposed operation would have no impact on any present or future Canadian FM broadcast facilities. The closest point of Canadian land to the contour is Pelee Island, Ontario. Please see **Figure 5**.

### **Fill-in and Minor Change Status**

This proposal is to serve as a fill-in translator for station WTAM Facility ID 59595, Cleveland, Ohio. The map of **Figure 6** demonstrates that the proposed 60 dBu contour is contained within the 2 mV/M signal and a 25 mile radius of the WTAM facility. It can also be seen that the proposed and permitted facilities are within the allowed 250 mile distance.

### **RF Fields Statement**

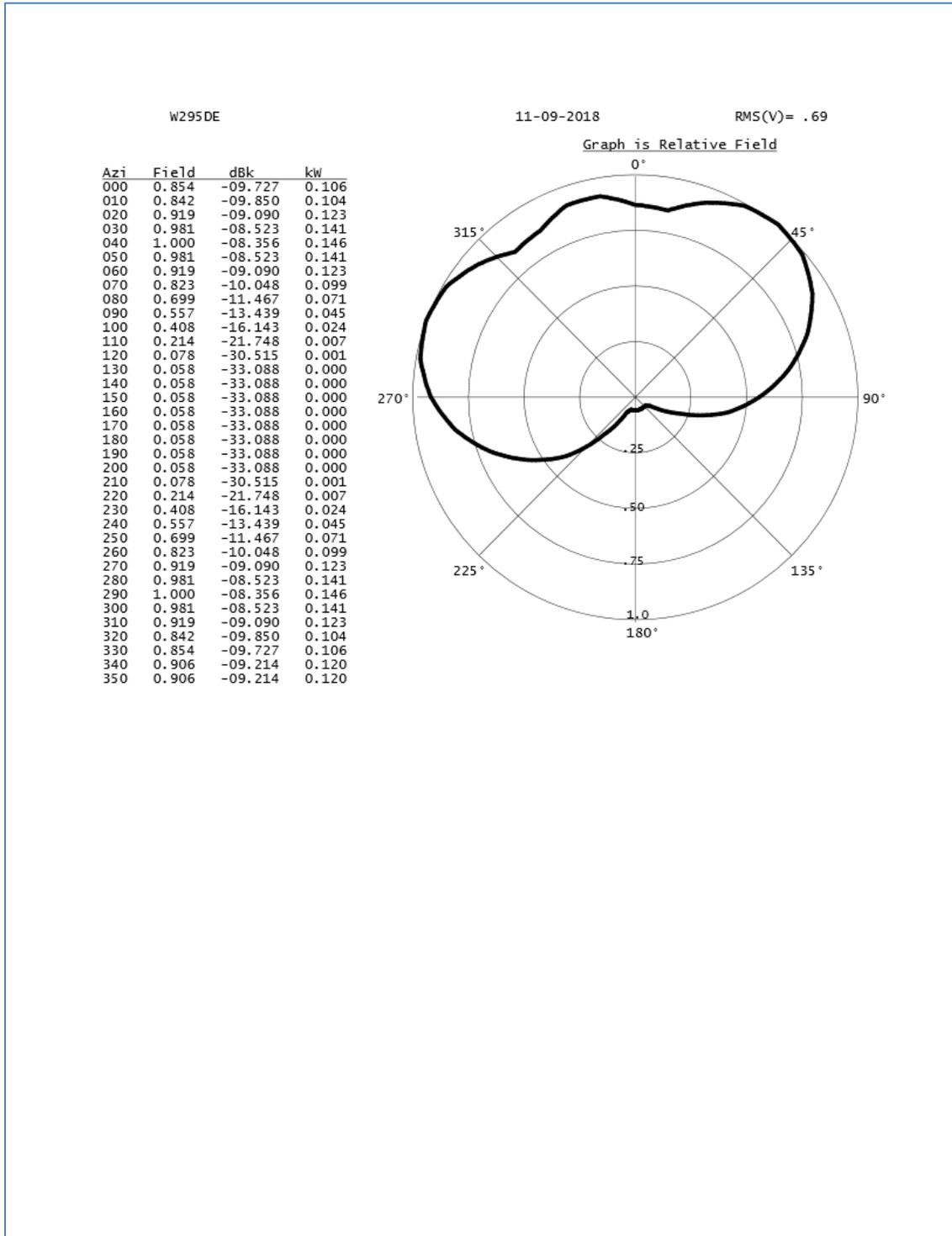
The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation."

The antenna system is a horizontal array of 2 Scala "CLFM" antenna mounted 188 meters above ground. For purposes of this analysis the FM Model program has been set to calculate values for a type=1 of antenna element, operated with an effective radiated power of 0.146 Kilowatts in vertical. At 2 meters above the surface, at 35 meters from the base of the tower, this proposal will contribute worst case, 0.3 microwatts per square centimeter, or 0.03 percent of the allowable ANSI limit for controlled exposure, and 0.15 percent of the allowable limit for uncontrolled exposure. This figure is less than 5% of the applicable FCC exposure limit at all locations extending out from the base of the tower. Section 1.1307(b)(3) excludes applications when the calculated level is predicted to be less than 5% of the applicable exposure limit. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the

Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

**Figure 0. Antenna Pattern**



# Figure 1. Overlap and Spacing Study

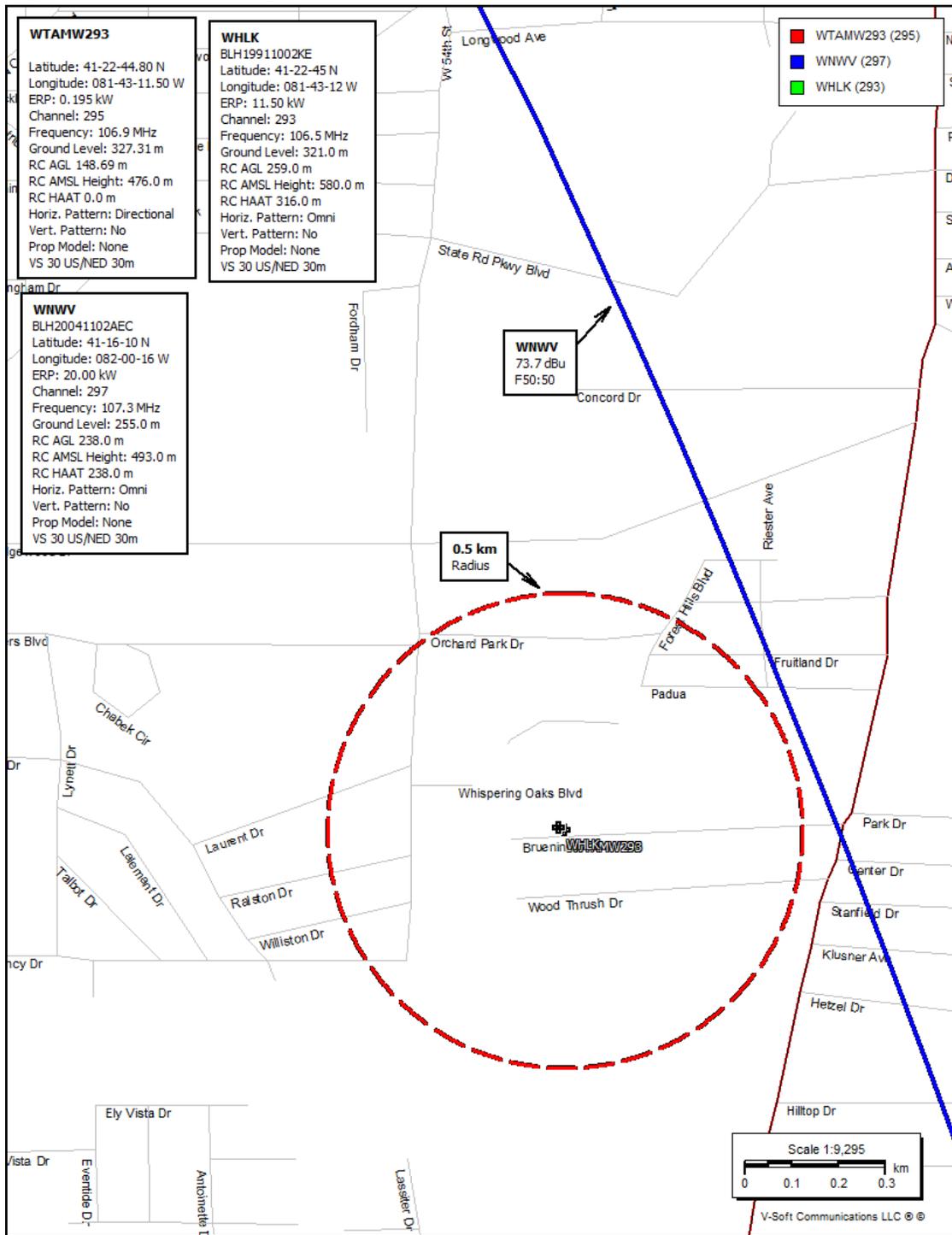
W295DE Moved Up Tower  
Capstar Tx, LLC, As Debtor IN Possession

REFERENCE CH# 295D - 106.9 MHz, Pwr= 0.146 kW DA, HAAT= 246.5 M, COR= 509 M DISPLAY DATES  
41 22 44.8 N. Average Protected F(50-50)= 17.93 km DATA 11-08-18  
81 43 11.6 W. Standard Directional SEARCH 11-09-18

| CH CITY | CALL  | TYPE STATE | ANT | AZI <-- | DIST FILE #       | LAT LNG                  | PWR(kw) HAAT(M) | INT(km) COR(M) | PRO(km) LICENSEE           | *IN* (Overlap in km) | *OUT*  |
|---------|---|------------|-----|---------|-------------------|--------------------------|-----------------|----------------|----------------------------|----------------------|--------|
| 295D    | W295DE  | LIC DV_ OH |     | 0.0     | 0.00              | 41 22 44.8<br>81 43 11.6 | 0.195           |                | ---                        | Reference---         |        |
|         | Cleveland   |            |     | 0.0     | BLFT20180827AAW   |                          |                 | 476            | Capstar Tx, LLC, As Debtor |                      |        |
| 293B    | WHLK  | LIC _CN OH |     | 0.0     | 0.00              | 41 22 45.0<br>81 43 12.0 | 11.500          | 5.3            | 65.0                       | -23.7*               | -66.5* |
|         | Cleveland   |            |     | 121.9   | BLH19911002KE     |                          | 316             | 580            | Citicasters Licenses, Inc. |                      |        |
| 295B    | WRQK-FM   | LIC _CX OH |     | 158.3   | 66.51             | 40 49 22.0<br>81 25 40.0 | 27.500          | 114.5          | 50.1                       | -51.0*               | 1.9    |
|         | Canton  |            |     | 338.5   | BLH20070209ABX    |                          | 103             | 436            | Capstar Tx, LLC, As Debtor |                      |        |
| 297B    | WNWV  | LIC _CX OH |     | 242.9   | 26.70             | 41 16 10.0<br>82 00 16.0 | 20.000          | 5.8            | 65.6                       | 7.3                  | -39.9* |
|         | Elyria  |            |     | 62.7    | BLH20041102AEC    |                          | 238             | 493            | Rubber City Radio Group, I |                      |        |
| 294B    | WDTW-FM   | LIC _CN MI |     | 314.4   | 152.52            | 42 19 55.0<br>83 02 42.0 | 61.000          | 81.5           | 67.6                       | 52.8                 | 46.6   |
|         | Detroit   |            |     | 133.5   | BMLH19890804KA    |                          | 155             | 338            | Amfm Radio Licenses, L.L.C |                      |        |
|         | Grandfathered at 61KW @ 155M HAAT   |            |     |         |                   |                          |                 |                |                            |                      |        |
| 241A    | WKFM  | LIC _CN OH |     | 262.6   | 64.85             | 41 18 05.0<br>82 29 16.0 | 3.400           | 0.0            | 0.0                        | 9.5R                 | 55.4M  |
|         | Huron   |            |     | 82.1    | BLH19960415KF     |                          | 133             | 361            | Elyria-Iorain Broadcasting |                      |        |
|         | Proposed to Canada 950830-Specially negotiated, short-spaced allotment limited to 6kw ERP and 100m HAAT or equivalent.-Accepted by Canada 950928  |            |     |         |                   |                          |                 |                |                            |                      |        |
| 296A    | WLWX  | LIC _CX PA |     | 89.5    | 108.99            | 41 22 50.0<br>80 24 48.0 | 2.100           | 38.0           | 25.2                       | 57.3                 | 63.4   |
|         | Greenville  |            |     | 270.3   | BMLE2010101026ABX |                          | 119             | 463            | Educational Media Foundati |                      |        |
| 294D    | W294CK  | LIC _C_ OH |     | 228.0   | 101.69            | 40 45 50.0<br>82 37 04.0 | 0.250           | 25.0           | 16.7                       | 66.3                 | 70.5   |
|         | Mansfield   |            |     | 47.4    | BLFT20180809AAK   |                          |                 | 532            | Gsm Media Corporation      |                      |        |
| 294B    | WA0B-FM   | LIC NC_ PA |     | 121.2   | 160.48            | 40 37 11.0<br>80 05 36.0 | 37.000          | 77.7           | 65.3                       | 78.4                 | 85.5   |
|         | Beaver Falls  |            |     | 302.3   | BMLE20090709ANU   |                          | 169             | 496            | Saint Joseph Missions      |                      |        |
| 298D    | W298CX  | CP DC_ OH  |     | 111.4   | 96.74             | 41 03 23.0<br>80 38 44.0 | 0.075           | 0.6            | 18.1                       | 88.4                 | 78.5   |
|         | Youngstown  |            |     | 292.1   | BNPFT20180418AEA  |                          |                 | 675            | Salem Media Of Massachuset |                      |        |
| 298A    | WFXJ-FM   | LIC _CX OH |     | 57.6    | 105.79            | 41 53 04.0<br>80 38 28.0 | 3.600           | 2.5            | 26.3                       | 85.6                 | 78.7   |
|         | North Kingsville  |            |     | 238.3   | BLH20020418AAE    |                          | 130             | 361            | Media One Holdings, LLC    |                      |        |
| 294B    | CHCD  | USE ON     |     | 36.8    | 191.07            | 42 44 48.0<br>80 19 07.0 | 50.000          | 78.0           | 65.0                       | 94.1                 | 86.3   |
|         | Simcoe  |            |     | 217.7   |                   |                          | 150             | 351            |                            |                      |        |
|         | Proposed to Commission 951027-Accepted by Commission 951129-Specially negotiated, short-spaced allotment limited to the following: 12kw ERP and 179.5m HAAT along the 114 degree azimuth toward channel 293B in Buffalo, NY; 21kw ERP and 179.5m HAAT along the 137.2 degree azimuth toward channel 295B1 in Clarendon, PA; 4.4kw ERP and 180m HAAT along the 146 degree azimuth to channel 295B1 in Lakewood, NY; 24.5kw ERP and 175.5m HAAT along the 179.5 degree azimuth to channel 294B in Beaver Falls, PA. |            |     |         |                   |                          |                 |                |                            |                      |        |
| 295A    | CIXXFM  | OPE _CN ON |     | 13.0    | 186.83            | 43 01 00.0<br>81 12 04.0 | 3.000           | 61.7           | 23.0                       | 106.9                | 89.6   |
|         | London  |            |     | 193.4   |                   |                          | 38              | 308            |                            |                      |        |
| 298B    | WGPR  | LIC _CX MI |     | 314.8   | 155.70            | 42 21 28.0<br>83 03 55.0 | 50.000          | 5.7            | 62.9                       | 131.8                | 91.3   |
|         | Detroit   |            |     | 133.9   | BLH20040422ABP    |                          | 124             | 316            | W.g.p.r., Inc.             |                      |        |

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM  
Contour distances are on direct line to and from reference station. Reference zone= East Zone, Co to 3rd adjacer  
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.

**Figure 2. Contour Map**



**Figure 3. Signal Level at or Near Ground Level**

| <p><b>Proposed Antenna:</b> Scala CL-FMV 2 Stack full wave</p> <p><b>Proposed Power:</b> 0.146 kW</p> <p><b>Antenna Height AGL:</b> 188 meters</p> <p><b>Interference Contour:</b> 113.7 dBu f(50:10)</p> <p><b>Artificial Rcv Antenna Height:</b> 2 meters</p> <p><b>Distance (Free Space) Equation:</b> <math>= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)}) * 1000</math></p> <p><b>Field Strength (dBu) Equation:</b> <math>= 106.92 - (20 * (\text{LOG}_{10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]</math></p> |          |       |        |           |                  |                  |                 |                |
|---|----------|-------|--------|-----------|------------------|------------------|-----------------|----------------|
| Depression  |          |       |        | Distance  |                  |                  |                 |                |
| Angle   | Antenna  |       |        | from Ant. | Distance         | Field Strength   | Distance        | Field Strength |
| Below   | Relative | ERP   | ERP    | to Interf | rom Ant. to      | in dBu @         | from Ant.       | in dBu @       |
| Horizon   | Field    | in kW | in dBk | Contour   | Artificial Plane | Artificial Plane | to Ground Level | Ground Level   |
| 0°  | 1.000    | 0.146 | -8.36  | 175.06 m  | infinite         | ---              | infinite        | ---            |
| -5°   | 0.948    | 0.131 | -8.82  | 165.95 m  | 2134.11 m        | 91.52 dBu        | 2157.06 m       | 91.42 dBu      |
| -10°  | 0.828    | 0.100 | -10.00 | 144.95 m  | 1071.13 m        | 96.33 dBu        | 1082.65 m       | 96.23 dBu      |
| -15°  | 0.646    | 0.061 | -12.15 | 113.09 m  | 718.65 m         | 97.64 dBu        | 726.38 m        | 97.54 dBu      |
| -20°  | 0.436    | 0.028 | -15.57 | 76.32 m   | 543.83 m         | 96.64 dBu        | 549.68 m        | 96.55 dBu      |
| -25°  | 0.233    | 0.008 | -21.01 | 40.79 m   | 440.11 m         | 93.04 dBu        | 444.85 m        | 92.95 dBu      |
| -30°  | 0.061    | 0.001 | -32.65 | 10.68 m   | 372.00 m         | 82.86 dBu        | 376.00 m        | 82.77 dBu      |
| -35°  | 0.069    | 0.001 | -31.58 | 12.08 m   | 324.28 m         | 85.12 dBu        | 327.77 m        | 85.03 dBu      |
| -40°  | 0.151    | 0.003 | -24.78 | 26.43 m   | 289.36 m         | 92.91 dBu        | 292.48 m        | 92.82 dBu      |
| -45°  | 0.178    | 0.005 | -23.35 | 31.16 m   | 263.04 m         | 95.17 dBu        | 265.87 m        | 95.08 dBu      |
| -50°  | 0.159    | 0.004 | -24.33 | 27.83 m   | 242.81 m         | 94.89 dBu        | 245.42 m        | 94.79 dBu      |
| -55°  | 0.116    | 0.002 | -27.07 | 20.31 m   | 227.06 m         | 92.73 dBu        | 229.51 m        | 92.64 dBu      |
| -60°  | 0.071    | 0.001 | -31.33 | 12.43 m   | 214.77 m         | 88.95 dBu        | 217.08 m        | 88.86 dBu      |
| -65°  | 0.040    | 0.000 | -36.32 | 7.00 m    | 205.23 m         | 84.36 dBu        | 207.44 m        | 84.27 dBu      |
| -70°  | 0.019    | 0.000 | -42.78 | 3.33 m    | 197.94 m         | 78.21 dBu        | 200.07 m        | 78.12 dBu      |
| -75°  | 0.010    | 0.000 | -48.36 | 1.75 m    | 192.56 m         | 72.87 dBu        | 194.63 m        | 72.78 dBu      |
| -80°  | 0.010    | 0.000 | -48.36 | 1.75 m    | 188.87 m         | 73.04 dBu        | 190.90 m        | 72.95 dBu      |
| -85°  | 0.010    | 0.000 | -48.36 | 1.75 m    | 186.71 m         | 73.14 dBu        | 188.72 m        | 73.05 dBu      |
| -90°  | 0.010    | 0.000 | -48.36 | 1.75 m    | 186.00 m         | 73.17 dBu        | 188.00 m        | 73.08 dBu      |

**Figure 4. Image of Proposed Support Tower**



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Imagery Date: 7/2013 41°22'45.07" N 81°43'05.50" W



**Figure 6. Fill-in and Minor Change Distance Map**

