

ENGINEERING STATEMENT  
RE DTV BROADCAST ENGINEERING DATA  
APPLICATION FOR POST-TRANSITION  
CONSTRUCTION PERMIT  
KQTV-DT, ST. JOSEPH, MISSOURI  
CHANNEL 7 45 KW ERP 86.5 METERS HAAT

JUNE 2008

COHEN, DIPPELL AND EVERIST, P.C.  
CONSULTING ENGINEERS  
RADIO AND TELEVISION  
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington            )  
  ) ss  
District of Columbia        )

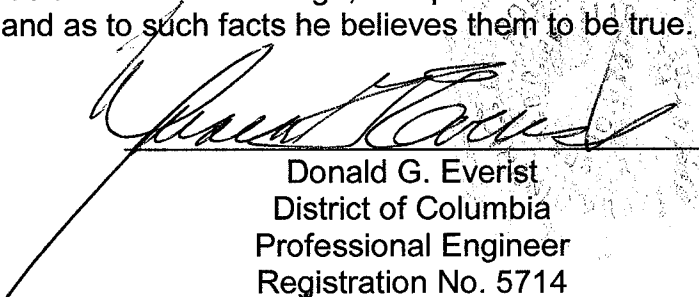
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

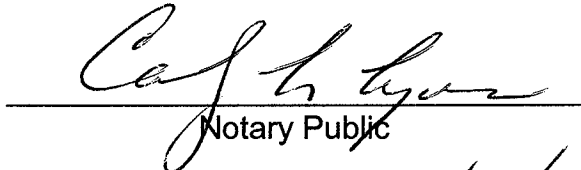
That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

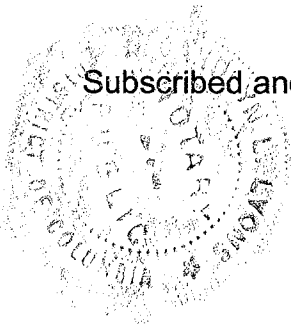
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

  
Donald G. Everist  
District of Columbia  
Professional Engineer  
Registration No. 5714

Subscribed and sworn to before me this 19<sup>th</sup> day of June, 2008.

  
Notary Public

My Commission Expires: 2/28/2013



COHEN, DIPPELL AND EVERIST, P. C.

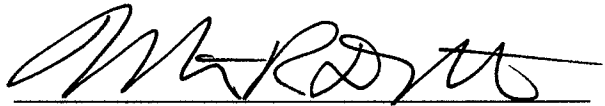
City of Washington                    )  
  ) ss  
District of Columbia                )

Martin R. Doczkat being duly sworn upon his oath, deposes and states that:

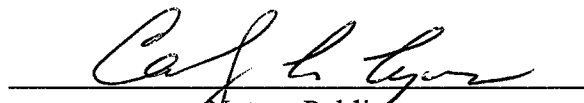
He is a graduate electrical engineer of the Pennsylvania State University, and is a staff engineer at Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

  
\_\_\_\_\_  
Martin R. Doczkat

Subscribed and sworn to before me this 19th day of June, 2008.

  
\_\_\_\_\_  
Notary Public

My Commission Expires: 2/28/2013



This engineering statement has been prepared on behalf of Nexstar Broadcasting, Inc. ("Nexstar"), licensee of KQTV(TV), St. Joseph, Missouri. The purpose of this engineering statement is to request a construction permit for post-transition digital television ("DTV") facilities.

KQTV(TV) is licensed to operate on NTSC television Channel 2 with a maximum visual effective radiated power ("ERP") of 100 kW (horizontal polarization) and height above average terrain ("HAAT") of 247 meters. KQTV-DT has been allocated DTV Channel 7 with facilities of 7.451 kW directional ERP and HAAT of 247 meters in the final DTV Table of Allotments.<sup>1</sup> KQTV-DT requests to construct its post-transition DTV operation with Channel 7 DTV facilities of 45 kW (horizontal polarization) at an HAAT of 86.5 meters in accordance with Paragraph 151 of the Third Periodic Review Report and Order.<sup>2</sup>

The DTV antenna will be top-mounted on an existing tower. The tower has an overall structure height above ground of 146.3 meters (480 feet). Exhibit E-1 shows a vertical sketch and the arrangement of the antennas on the tower. The existing transmitter site is located 2 miles east of St. Joseph, south of Pickett, St. Joseph, Missouri.

The geographic coordinates of the site are:

North Latitude: 39° 44' 42"

West Longitude: 94° 45' 06"

---

<sup>1</sup>"In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service", MM Docket 87-268, Memorandum Opinion and Order on Reconsideration of the Seventh Report and Order and Eighth Report and Order (FCC 08-72) Released March 6, 2008.

<sup>2</sup>"In the Matter of Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television", MB Docket No. 07-91, Report & Order (FCC 07-228), Released December 31, 2007.

## NAD-27

Tower Registration No. 1003422

Equipment Data

|          |            |               |
|----------|------------|---------------|
| Antenna: | MCI        | 954132        |
|          | Beam Tilt  | 0° electrical |
|          | Power Gain | 4.27          |

Antenna information per Section 73.625 of the FCC Rules is provided in Exhibit E-2.

Power Data

|  |          |           |
|--|----------|-----------|
| Transmitter output   | 11.92 kW | 10.76 dBk |
| Total Transmission line efficiency/loss<br>Dielectric, 3-1/8", 50 ohm rigid<br>or equivalent, length:<br>125 meters (410 feet) | 88.4%    | 0.54 dB   |
| Input Power to the antenna   | 10.54 kW | 10.22 dBk |
| Antenna power gain   | 4.27     | 6.31 dBk  |
| Effective Radiated Power   | 45 kW    | 16.53 dBk |

Elevation Data

|  |                          |
|--|--------------------------|
| Vertical dimension of Channel 7<br>side-mounted antenna                                | 6.7 meters<br>22 feet    |
| Overall height above ground of existing<br>antenna structure (including appurtenances) | 146.3 meters<br>480 feet |
| Center of radiation of Channel 7<br>antenna above ground                               | 94.5 meters<br>310 feet  |

|   |                           |
|---|---------------------------|
| Elevation of site above mean sea level                                      | 275.8 meters<br>905 feet  |
| Center of radiation of Channel 7<br>antenna above mean sea level            | 370.3 meters<br>1215 feet |
| Overall height above mean sea level<br>of existing tower (including beacon) | 422.1 meters<br>1385 feet |
| Antenna height above average terrain  | 86.5 meters               |

#### Filing Freeze Waiver Request

The proposed KQTV-DT post-transition facilities will expand the noise-limited service contour beyond that established by Appendix B of the *Memorandum Opinion and Order*<sup>3</sup>. In accordance with Paragraph 151 of the Third Periodic Review Report and Order<sup>4</sup>, Nexstar proposes a minor expansion of its post-transition DTV allotment which will accommodate the use of a new DTV antenna and also avoid a significant reduction in post-transition service from its current analog service area. Further, the proposed minor expansion does not extend more than 5 miles in any direction beyond the KQTV-DT facility as defined by the post-transition DTV Table Appendix B (see Exhibit E-3) and does not exceed the 0.5 percent new interference criteria to any other potentially affected station in Appendix B of the DTV Table. Therefore,

---

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

Nexstar hereby requests a waiver of the Filing Freeze<sup>5</sup> and proposes to construct DTV facilities of 45 kW non-directional ERP at a height above average terrain of 86.5 meters.

### Coverage

The average elevation data for 3.1 to 16.1 km along the eight cardinal radials has been determined from the NGDC 3-second database. The F(50,90) DTV coverage contours have been computed from reference to the propagation data for Channel 7 as published by the FCC in Figure 10 and 10a, Section 73.699 of the FCC Rules and Regulations. Utilizing the formula in Section 73.625(b)(2) of the rules for the effective heights, it is found that the depression angle,  $A_h$ , varies from 0.244 to 0.285 degrees. Since the relative vertical field is greater than 90% of the maximum at these depression angles, the maximum power was used in determining the distance to the DTV contour.

Exhibit E-4 shows the proposed KQTV-DT, 48 dBu and 41 dBu F(50,90) coverage contours on a map and includes the legal boundaries of St. Joseph, Missouri.

### Interference Analysis

A study of predicted interference caused by the proposed KQTV-DT operation has been performed using a version of the Longley-Rice program as described in OET Bulletin No. 69 (February 6, 2004) and the Public Notice, "Additional Application Processing Guidelines for Digital Television (DTV)" (August 1998). The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a WindowsXP

---

<sup>5</sup>Public Notice entitled, "Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes", (DA 04-2466) Released August 3, 2004.

platform. Comparison of service/interference areas and population indicates that this model closely matches the FCC's evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 2 sq. km. Using 3-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 2000 census centroids, all studies are based upon data in the current CDBS database update of the FCC's engineering database and the final DTV Table of Allotments. A Longley-Rice study was performed with the proposed KQTV-DT facilities and all relevant stations listed in the FCC database as of June 12, 2008. The study results and the included stations are listed in Table II. No potentially affected station is predicted to receive more than 0.5% interference.

#### Other Licensed and Broadcast Facilities

There is one AM station, KGNM, located within 3.22 km of the proposed site, however, no interference is anticipated. According to CDBS, the proposed operation of KQTV-DT is the only broadcast station located within 2 km of the proposed site. No adverse technical effect is anticipated by the DTV operation to any other FCC licensed facility, however, if any problems occur, the permittee will take the necessary steps to resolve them.

#### Radio Frequency Field Level ("RFF" Level)

| <u>Station</u>      | <u>ERP</u><br>(kW) | <u>HAA</u><br><u>T</u><br>(m) | <u>Frequency</u><br>(MHz) | <u>Ch</u> | <u>RCAGL*</u><br><u>*</u><br>(m) | <u>F*</u> | <u>S (μW/cm<sup>2</sup>)</u> | Uncontrolled<br><u>RFF</u><br>(%) | Controlled<br><u>RFF</u><br>(%) |
|---------------------|--------------------|-------------------------------|---------------------------|-----------|----------------------------------|-----------|------------------------------|-----------------------------------|---------------------------------|
| KQTV-DT<br>Proposed | 45                 | 86.5                          | 174-180                   | 7         | 92.5                             | 0.5       | 44                           | 22                                | 4.4                             |

\*F = assumed value



\*\* RCAGL - 2 meters

The proposed KQTV-DT facilities are predicted to contribute no more than approximately  $44 \mu\text{W}/\text{cm}^2$  or 22% of the limit for an uncontrolled environment which is 4.4% of the limit for a controlled environment according to FCC guidelines.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

#### Environmental Assessment

An environmental assessment ("EA") is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the licensee indicates:

- (a)(1) The existing tower is not located in an officially designated wilderness area.
- (a)(2) The existing tower is not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.

- (a)(4) The proposed facilities located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
- (a)(5) The existing tower is not located near any known Indian religious sites.
- (a)(6) The existing tower is not located in a flood plain.
- (a)(7) The installation of the DTV facilities on an existing guyed tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.
- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.

Cohen, Dippell and Everist, P.C.

TABLE I  
COMPUTED COVERAGE DATA  
FOR THE PROPOSED DTV OPERATION OF  
KQTV-DT, ST. JOSEPH, MISSOURI  
CHANNEL 7 45 KW 86.5 METERS HAAT  
JUNE 2008

| Radial<br>Bearing<br>N ° E, T | Average*                              | Effective<br>Height<br>meters | Depression<br>Angle | ERP At<br>Radio<br>Horizon<br>kW | Distance to Contour F(50,90) |                               |
|-------------------------------|---------------------------------------|-------------------------------|---------------------|----------------------------------|------------------------------|-------------------------------|
|                               | Elevation<br>3.2 to 16.1 km<br>meters |                               |                     |                                  | 43 dBu<br>City Grade<br>km   | 36 dBu<br>Noise-Limited<br>km |
| 0                             | 273.9                                 | 96.4                          | 0.272               | 45                               | 71.7                         | 82.8                          |
| 45                            | 285.3                                 | 85.0                          | 0.255               | 45                               | 69.2                         | 80.2                          |
| 90                            | 283.0                                 | 87.3                          | 0.259               | 45                               | 69.7                         | 80.7                          |
| 135                           | 281.7                                 | 88.6                          | 0.261               | 45                               | 70.0                         | 81.0                          |
| 180                           | 287.6                                 | 82.7                          | 0.252               | 45                               | 68.7                         | 79.7                          |
| 225                           | 292.8                                 | 77.5                          | 0.244               | 45                               | 67.5                         | 78.6                          |
| 270                           | 264.4                                 | 105.9                         | 0.283               | 45                               | 73.6                         | 85.1                          |
| 315                           | 301.6                                 | 68.7                          | 0.230               | 45                               | 65.5                         | 76.5                          |
| Average                       | 283.8                                 | 86.5                          |                     |                                  |                              |                               |

\*Based on data from FCC 3-second data base

DTV Channel 7 (174-180 MHz)  
Average Elevation 3.2 to 16.1 km 283.8 meters AMSL  
Center of Radiation 370.3 meters AMSL  
Antenna Height Above Average Terrain 86.5 meters  
Effective Radiated Power 45 kW (16.53 dBk) Max.

North Latitude: 39° 44' 42"  
West Longitude: 94° 45' 06"

(NAD-27)

ABOVE MEAN SEA LEVEL

ABOVE GROUND

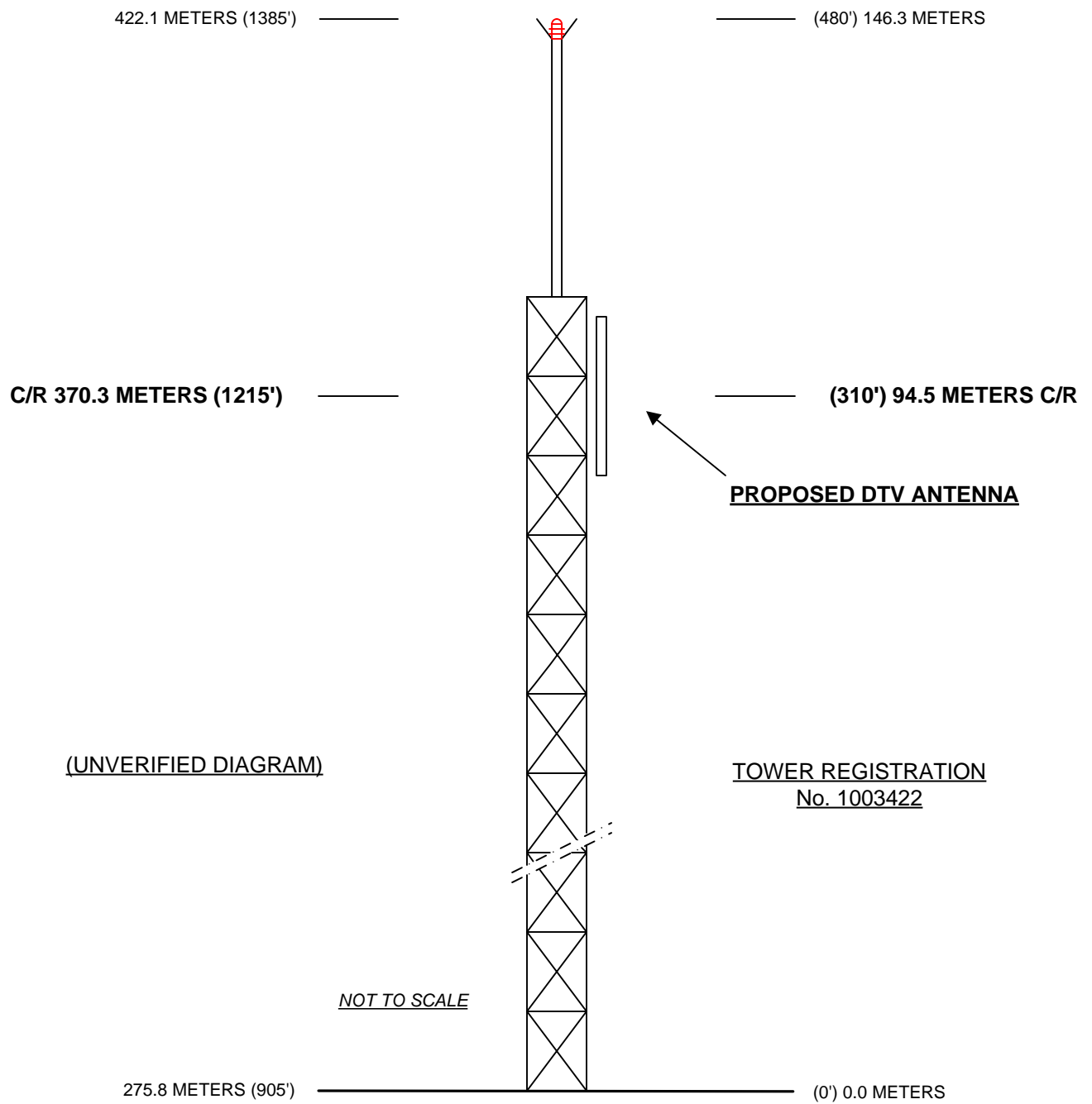


EXHIBIT E - 1  
VERTICAL SKETCH  
FOR THE PROPOSED DTV OPERATION OF  
**KQTV-DT, ST. JOSEPH, MISSOURI**  
JUNE 2008

COHEN, DIPPELL AND EVERIST, P.C.

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

KQTV-DT, ST. JOSEPH, MISSOURI



# Micro Communications, Inc.

QUALITY RF TRANSMISSION SYSTEMS AND PRODUCTS SINCE 1966

15 Caron Street, Merrimack, New Hampshire 03054 • Tel: 800-545-0608 • Fax: 603-429-1633

**Date:** July 27, 2007

**Proposal Number:** 11577

**Prepared For:** Nexstar Broadcasting  
KQTV  
4000 Faraon Street  
St. Joseph, MO 64506

**ATTN:** Mr. Ken Jang

**Subject:** VHF Broadband Antenna System  
KQTV  
DTV Ch-7

**Provided By:** Jim DeStefano

National Sales Manager

**Phone:** 800-545-0608 EXT 5266

**FAX:** 570-344-7999

**Cell:** 570-885-2666

**E-mail:** jim.destefano@mcibroadcast.com

**Web Site:** www.mcibroadcast.com

# System Analysis

## **Station:**

|               |         |
|---------------|---------|
| Call Letters: | KQTV    |
| Channel:      | 7       |
| Frequency:    | 177 MHz |
| Service:      | DTV     |

## **Antenna:**

|                           |                           |
|---------------------------|---------------------------|
| Gain (dbd):               | 6.30 dbd                  |
| Power Gain:               | 4.27                      |
| Electrical Beam Tilt:     | 0 degrees                 |
| Null Fill:                | 0 %                       |
| Input Connector:          | 3-1/8 in.                 |
| Input VSWR:               | <1.10 to 1 174 to 216 MHz |
| Effective Radiated Power: | 7.45 kW                   |
|                           | 8.72 dbk                  |
| Antenna Input Power:      | 2.42 dbk                  |
| Antenna Type:             | Panel:                    |
| Antenna Length:           | 22 ft.                    |
| Antenna Mounting:         | Side                      |
| Model Number:             | 954132                    |

## **Transmission Line:**

|                         |            |
|-------------------------|------------|
| Line Type:              | 3-1/8 in.  |
| Line Length:            | 804 ft.    |
| Attenuation per/100ft.: | 0.123 db   |
| Line Loss:              | 0.98892 db |
| System Efficiency:      | 79.64 %    |

## **Transmitter Power:**

|          |
|----------|
| 2.19 kW  |
| 3.41 dbk |

## **Combiner Loss:**

0 db



**Micro Communications, Inc.**

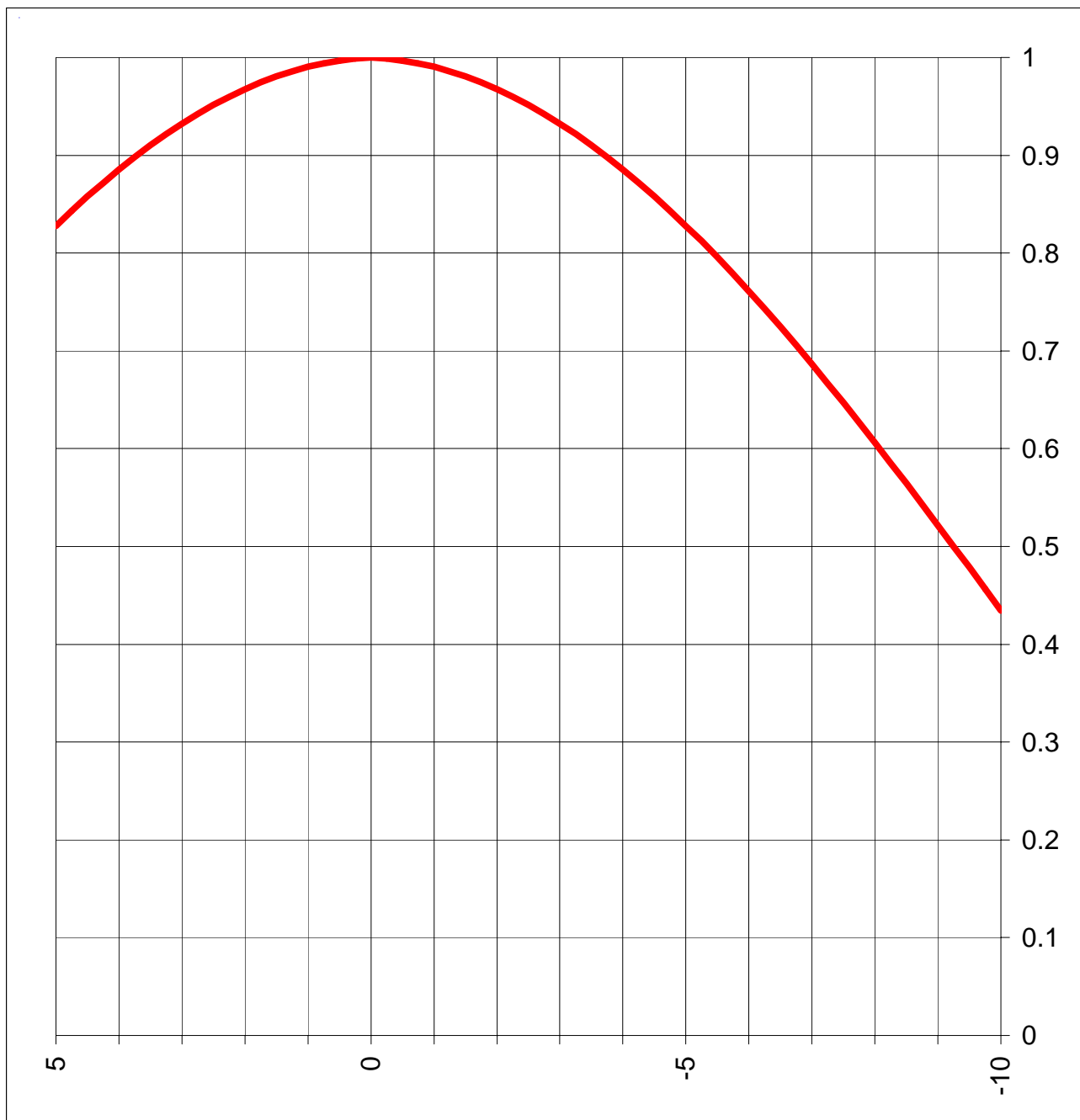
15 Caron Street, Merrimack, NH 03054

Tel: 800-545-0608

FAX: 603-429-1633

Page 2

## Vertical Pattern



**Micro Communications, Inc.**  
15 Caron Street, Merrimack, NH 03054  
Tel: 800-545-0608  
FAX: 603-429-1633



## Vertical Pattern Data

| Degrees | Field | Degrees | Field | Degrees | Field | Degrees | Field | Degrees | Field |
|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| -10.00  | 0.435 | 0.25    | 0.999 | 10.50   | 0.389 | 20.75   | 0.216 | 49      | 0.063 |
| -9.75   | 0.457 | 0.50    | 0.997 | 10.75   | 0.367 | 21.00   | 0.219 | 50      | 0.045 |
| -9.50   | 0.478 | 0.75    | 0.994 | 11.00   | 0.344 | 21.25   | 0.222 | 51      | 0.028 |
| -9.25   | 0.500 | 1.00    | 0.990 | 11.25   | 0.322 | 21.50   | 0.224 | 52      | 0.011 |
| -9.00   | 0.522 | 1.25    | 0.986 | 11.50   | 0.300 | 21.75   | 0.225 | 53      | 0.007 |
| -8.75   | 0.543 | 1.50    | 0.981 | 11.75   | 0.278 | 22.00   | 0.226 | 54      | 0.024 |
| -8.50   | 0.564 | 1.75    | 0.974 | 12.00   | 0.257 | 22.25   | 0.226 | 55      | 0.040 |
| -8.25   | 0.585 | 2.00    | 0.968 | 12.25   | 0.235 | 22.50   | 0.226 | 56      | 0.055 |
| -8.00   | 0.606 | 2.25    | 0.960 | 12.50   | 0.214 | 22.75   | 0.225 | 57      | 0.069 |
| -7.75   | 0.627 | 2.50    | 0.951 | 12.75   | 0.193 | 23.00   | 0.224 | 58      | 0.082 |
| -7.50   | 0.647 | 2.75    | 0.942 | 13.00   | 0.173 | 23.25   | 0.223 | 59      | 0.094 |
| -7.25   | 0.667 | 3.00    | 0.932 | 13.25   | 0.153 | 23.50   | 0.221 | 60      | 0.104 |
| -7.00   | 0.687 | 3.25    | 0.922 | 13.50   | 0.133 | 23.75   | 0.218 | 61      | 0.113 |
| -6.75   | 0.706 | 3.50    | 0.910 | 13.75   | 0.114 | 24.00   | 0.215 | 62      | 0.122 |
| -6.50   | 0.725 | 3.75    | 0.898 | 14.00   | 0.095 | 24.25   | 0.212 | 63      | 0.128 |
| -6.25   | 0.743 | 4.00    | 0.885 | 14.25   | 0.076 | 24.50   | 0.208 | 64      | 0.134 |
| -6.00   | 0.761 | 4.25    | 0.872 | 14.50   | 0.058 | 24.75   | 0.204 | 65      | 0.138 |
| -5.75   | 0.779 | 4.50    | 0.858 | 14.75   | 0.041 | 25.00   | 0.200 | 66      | 0.141 |
| -5.50   | 0.796 | 4.75    | 0.843 | 15.00   | 0.024 | 26.00   | 0.178 | 67      | 0.143 |
| -5.25   | 0.812 | 5.00    | 0.828 | 15.25   | 0.007 | 27.00   | 0.153 | 68      | 0.144 |
| -5.00   | 0.828 | 5.25    | 0.812 | 15.50   | 0.009 | 28.00   | 0.124 | 69      | 0.144 |
| -4.75   | 0.843 | 5.50    | 0.796 | 15.75   | 0.025 | 29.00   | 0.094 | 70      | 0.142 |
| -4.50   | 0.858 | 5.75    | 0.779 | 16.00   | 0.040 | 30.00   | 0.062 | 71      | 0.136 |
| -4.25   | 0.872 | 6.00    | 0.761 | 16.25   | 0.054 | 31.00   | 0.030 | 72      | 0.128 |
| -4.00   | 0.885 | 6.25    | 0.743 | 16.50   | 0.068 | 32.00   | 0.001 | 73      | 0.119 |
| -3.75   | 0.898 | 6.50    | 0.725 | 16.75   | 0.082 | 33.00   | 0.030 | 74      | 0.109 |
| -3.50   | 0.910 | 6.75    | 0.706 | 17.00   | 0.095 | 34.00   | 0.057 | 75      | 0.098 |
| -3.25   | 0.922 | 7.00    | 0.687 | 17.25   | 0.107 | 35.00   | 0.081 | 76      | 0.087 |
| -3.00   | 0.932 | 7.25    | 0.667 | 17.50   | 0.119 | 36.00   | 0.101 | 77      | 0.075 |
| -2.75   | 0.942 | 7.50    | 0.647 | 17.75   | 0.130 | 37.00   | 0.118 | 78      | 0.062 |
| -2.50   | 0.951 | 7.75    | 0.627 | 18.00   | 0.140 | 38.00   | 0.131 | 79      | 0.049 |
| -2.25   | 0.960 | 8.00    | 0.606 | 18.25   | 0.150 | 39.00   | 0.140 | 80      | 0.035 |
| -2.00   | 0.968 | 8.25    | 0.585 | 18.50   | 0.160 | 40.00   | 0.146 | 81      | 0.032 |
| -1.75   | 0.974 | 8.50    | 0.564 | 18.75   | 0.168 | 41.00   | 0.148 | 82      | 0.029 |
| -1.50   | 0.981 | 8.75    | 0.543 | 19.00   | 0.177 | 42.00   | 0.146 | 83      | 0.025 |
| -1.25   | 0.986 | 9.00    | 0.522 | 19.25   | 0.184 | 43.00   | 0.141 | 84      | 0.022 |
| -1.00   | 0.990 | 9.25    | 0.500 | 19.50   | 0.191 | 44.00   | 0.133 | 85      | 0.018 |
| -0.75   | 0.994 | 9.50    | 0.478 | 19.75   | 0.197 | 45.00   | 0.123 | 86      | 0.015 |
| -0.50   | 0.997 | 9.75    | 0.457 | 20.00   | 0.203 | 46.00   | 0.110 | 87      | 0.011 |
| -0.25   | 0.999 | 10.00   | 0.435 | 20.25   | 0.208 | 47.00   | 0.095 | 88      | 0.007 |
| 0.00    | 1.000 | 10.25   | 0.412 | 20.50   | 0.212 | 48.00   | 0.080 | 89      | 0.004 |
|         |       |         |       |         |       |         |       | 90      | 0.000 |
|         |       |         |       |         |       |         |       |         |       |
|         |       |         |       |         |       |         |       |         |       |

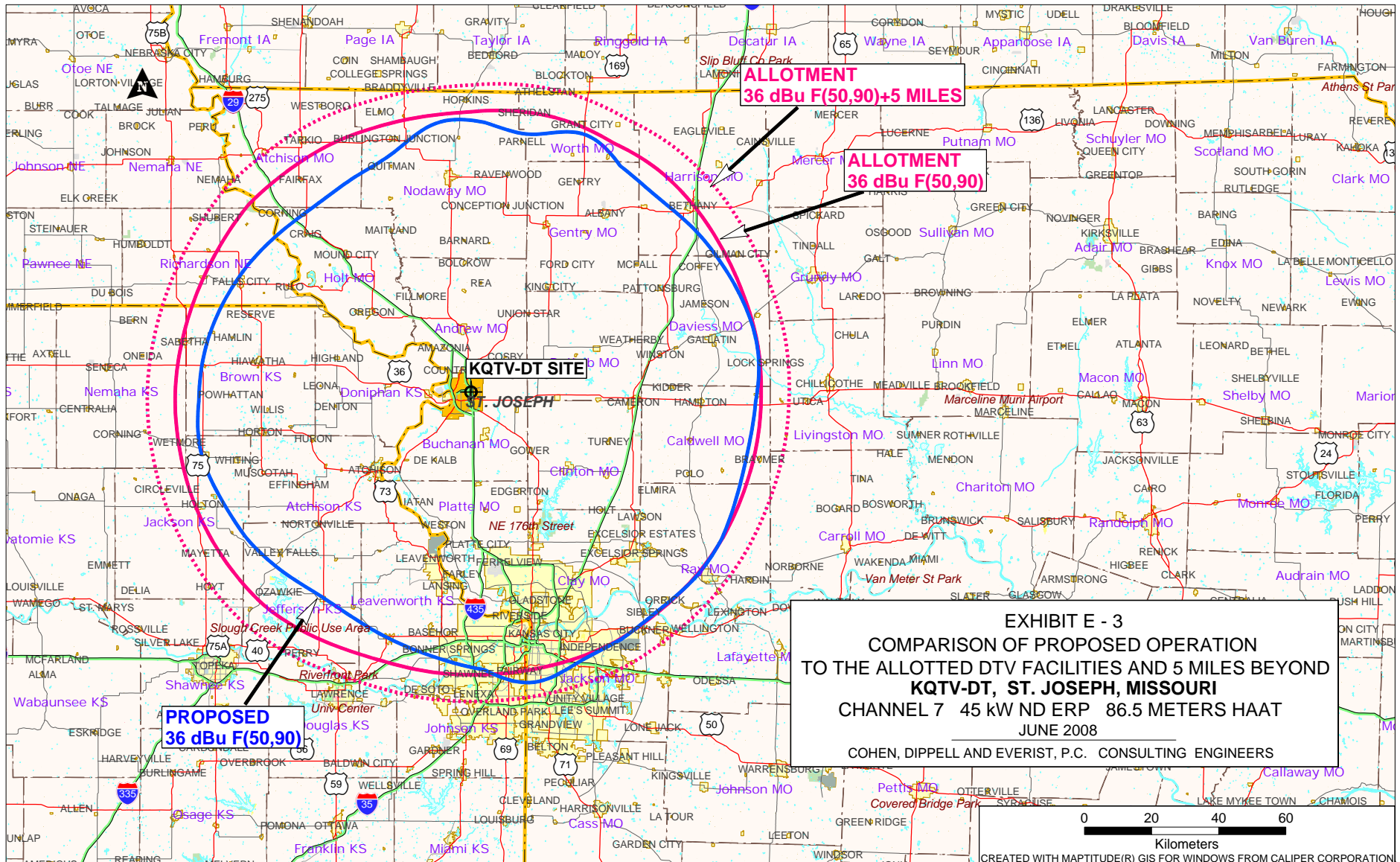


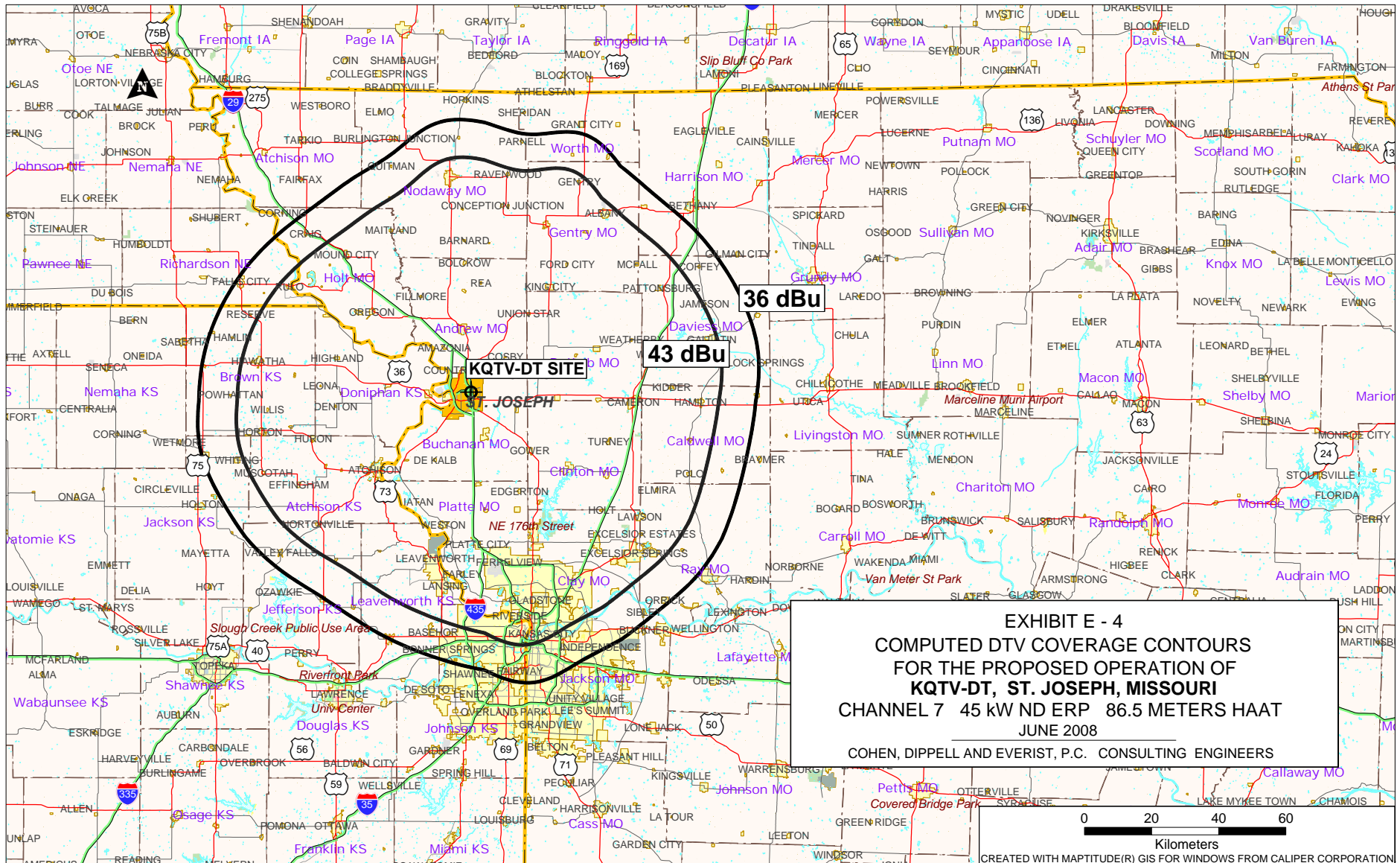
**Micro Communications, Inc.**  
 15 Caron Street, Merrimack, NH 03054  
 Tel: 800-545-0608  
 FAX: 603-429-1633

COHEN, DIPPELL AND EVERIST, P.C.

TABLE II  
LONGLEY-RICE INTERFERENCE ANALYSIS  
FOR THE PROPOSED OPERATION  
ABOVE ITS ALLOTTED APPENDIX B FACILITIES AND  
IN RELATION TO OTHER ALLOTTED APPENDIX B FACILITIES  
AND OTHER POTENTIALLY AFFECTED STATIONS IN CDBS  
KQTV-DT, ST. JOSEPH, MISSOURI  
CHANNEL 7 45 KW ND ERP 86.5 METERS HAAT  
JUNE 2008

| <u>Channel</u> | <u>Call</u> | <u>City/State</u> | <u>Dist(km)</u> | <u>Status</u> | <u>FCC File No.</u> | <u>Result</u>   |
|----------------|-------------|-------------------|-----------------|---------------|---------------------|-----------------|
| 7              | KWWL-DT     | WATERLOO IA       | 382.7           | ALLOT         |                     | 0.00%           |
| 7              | KWWL-DT     | WATERLOO IA       | 382.7           | CP            | BPCDT-20080314ADY   | 0.00%           |
| 7              | KBSH-DT     | HAYS KS           | 405.8           | CP MOD        | BMPCDT-20080313ABR  | no interference |
| 7              | KBSH-DT     | HAYS KS           | 405.8           | ALLOT         |                     | no interference |
| 7              | KOAM-DT     | PITTSBURG KS      | 280.6           | CP            | BPCDT-20080314ADI   | 0.44%           |
| 7              | KOAM-DT     | PITTSBURG KS      | 280.6           | ALLOT         |                     | 0.47%           |
| 7              | KHQA-DT     | HANNIBAL MO       | 292.9           | ALLOT         |                     | 0.22%           |
| 7              | KHQA-DT     | HANNIBAL MO       | 292.9           | CP            | BPCDT-20080317AGY   | 0.25%           |





### SECTION III - D - DTV Engineering

**Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.**

**Pre-Transition Certification Checklist:** An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction pen-nit application to modify pre-transition facilities. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

**Post-Transition Expedited Processing.** An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:
  - (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
  - (b) It will operate a pre-transition facility from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
  - (c) It will operate a pre-transition facility with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
  - (d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"). ☐ Yes ☐ No  
☐ N/A
  - (e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B. ☐ Yes ☐ No  
☐ N/A
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RIF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. ☐ Yes ☐ No

Applicant must **submit the Exhibit** called for in Item 13.

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. ☐ Yes ☐ No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. ☐ Yes ☐ No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. ☐ Yes ☐ No

### SECTION III - D DTV Engineering

**TECHNICAL SPECIFICATIONS** Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

#### TECH BOX

1. Channel Number: DTV \_\_\_\_\_ Analog TV, if any \_\_\_\_\_
2. Zone: ☐ I ☐ II ☐ III
3. Antenna Location Coordinates: (NAD 27)
- \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " ☐ N ☐ S Latitude  
\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " ☐ E ☐ W Longitude
4. Antenna Structure Registration Number: \_\_\_\_\_
- ☐ Not applicable ☐ FAA Notification Filed with FAA
5. Antenna Location Site Elevation Above Mean Sea Level: \_\_\_\_\_ meters
6. Overall Tower Height Above Ground Level: \_\_\_\_\_ meters
7. Height of Radiation Center Above Ground Level: \_\_\_\_\_ meters
8. Height of Radiation Center Above Average Terrain: \_\_\_\_\_ meters
9. Maximum Effective Radiated Power (average power): \_\_\_\_\_ kW
10. Antenna Specifications:
- a. 

|              |       |
|--------------|-------|
| Manufacturer | Model |
|--------------|-------|
- b. Electrical Beam Tilt: \_\_\_\_\_ degrees ☐ Not Applicable
- c. Mechanical Beam Tilt: \_\_\_\_\_ degrees toward azimuth \_\_\_\_\_ degrees True ☐ Not Applicable
- Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). 

|             |
|-------------|
| Exhibit No. |
|-------------|
- d. Polarization: ☐ Horizontal ☐ Circular ☐ Elliptical

## TECH BOX

e. Directional Antenna Relative Field Values:

☐

Not applicable (Nondirectional)

Rotation: \_\_\_\_\_

☐

No rotation

| Degree              | Value | Degree | Value | Degree | Value | Degree | Value | Degree | Value | Degree | Value |
|---------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 0                   |       | 60     |       | 120    |       | 180    |       | 240    |       | 300    |       |
| 10                  |       | 70     |       | 130    |       | 190    |       | 250    |       | 310    |       |
| 20                  |       | 80     |       | 140    |       | 200    |       | 260    |       | 320    |       |
| 30                  |       | 90     |       | 150    |       | 210    |       | 270    |       | 330    |       |
| 40                  |       | 100    |       | 160    |       | 220    |       | 280    |       | 340    |       |
| 50                  |       | 110    |       | 170    |       | 230    |       | 290    |       | 350    |       |
| Additional Azimuths |       |        |       |        |       |        |       |        |       |        |       |

If a directional antenna is proposed, the requirements of 47 C.F.R. Section 73.625(c) must be satisfied. **Exhibit required.**

Exhibit No.

11. Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if **Certification Checklist** Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616?

☐

Yes

☐

No

If "No," attach as an Exhibit justification therefore, including a summary of any related previously granted waivers.

Exhibit No.

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** Item 3 is answered "No.")

Exhibit No.

13. **Environmental Protection Act. Submit in an Exhibit** the following:

Exhibit No.

- a. If **Certification Checklist Item 2** is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radio frequency electromagnetic exposure in excess of FCC guidelines.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

**PREPARER'S CERTIFICATION IN SECTION III MUST BE COMPLETED AND SIGNED.**



13. **Petition for Rulemaking/Counterproposal to Add New FM Channel to FM Table of Allotments.** If the application is being submitted concurrently with a Petition for Rulemaking or Counterproposal to Amend the FM Table of Allotments (47 C.F.R. Section 73.202) to add a new FM channel allotment, petitioner/counter-proponent certifies that, if the FM channel allotment requested is allotted, petitioner/counter-proponent will apply to participate in the auction of the channel allotment requested and specified in this application.

☐ Yes ☐ No ☐ N/A

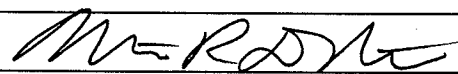
I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

|   |  |
|---|--|
| Typed or Printed Name of Person Signing | Typed or Printed Title of Person Signing |
| Signature                               | Date                                     |

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

### SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

|  |  |                   |
|--|--|-------------------|
| Name<br>Martin R. Doczkat  | Relationship to Applicant (e.g., Consulting Engineer)<br>Consulting Engineer |                   |
| Signature<br> | Date<br>June 19, 2008  |                   |
| Mailing Address<br>Cohen, Dippell and Everist, P.C, 1300 L Street, NW Suite 1100                 |  |                   |
| City<br>Washington   | State or Country (if foreign address)<br>DC                                  | ZIP Code<br>20005 |
| Telephone Number (include area code)<br>(202) 898-0111   | E-Mail Address (if available)<br>cde@attglobal.net                           |                   |

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).