

TECHNICAL EXHIBIT  
MINOR AMENDMENT TO PENDING APPLICATION  
STATION WTVM-DT (FACILITY ID 595)  
COLUMBUS, GEORGIA

AUGUST 6, 2002

CH 47    528 KW (MAX-DA)    115 M

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Table of Contents

|          |                                      |
|----------|--------------------------------------|
|          | Technical Narrative                  |
| Figure 1 | Antenna and Supporting Structure     |
| Figure 2 | Antenna Patterns                     |
| Figure 3 | Predicted F(50,90) Coverage Contours |

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Technical Narrative

This Technical Exhibit was prepared on behalf of digital television broadcast station WTVM-DT at Columbus, Georgia. This “checklist” amendment application proposes only to update the antenna structure registration. There are no proposed changes to the currently pending application with regards to ERP, directional antenna, antenna HAAT, transmitter site, channel or city of license (Columbus).

Proposed Facilities

The proposed site coordinates remain (NAD27): 32-19-25 N, 84-46-46 W. A directional antenna maximum ERP of 528 kW and antenna HAAT of 115 meters are proposed. The new FCC antenna structure registration number is 1235246. Figure 1 is a tower sketch showing the proposed tower and antenna location.

Radiofrequency Electromagnetic Field Exposure

The proposed WTVM-DT facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed antenna is located 87.8 meters above ground level with a maximum ERP of 528 kW. A relative field value of 0.123 was assumed for the antenna at a downward angle of 67 degrees (see Figure 2C). The calculated power density at a point 2 meters (6.6 feet) above ground level and 67 degrees down from horizontal is  $0.0307 \text{ mW/cm}^2$ . This is about 6.9% of the FCC's recommended limit of  $0.45 \text{ mW/cm}^2$  for channel 47 for an “uncontrolled” environment. Since this is greater than the categorically excluded 5% value, a composite study of all nearby authorized and proposed broadcast operations was conducted. The stations considered are tabulated below:

| Station             | Antenna            | Assumed Rel. Field | Uncontrolled Limit Contribution    |
|---------------------|--------------------|--------------------|------------------------------------|
| WVRK(FM), Ch. 275C  | Not available      | 0.57 "worst-case"  | < 6 % (calculated)                 |
| WSWS-DT(CP), Ch. 31 | DIE TUP-12-C3      |                    | < 0.1 % (from WSWS-DT application) |
| WRBL-DT(CP), Ch. 15 | DIE TFU-30DSC-R O3 | 0.08               | < 0.4 % (calculated)               |
| WSWS-TV(App), Ch.66 | Not available      | 0.5 "conservative" | < 30 % (calculated)                |
| WTVM(TV), Ch. 9     | Not available      | 1.0 "worst-case"   | < 15 % (calculated)                |
| WRBL(TV), Ch. 3     | Not available      | 1.0 "worst-case"   | < 4 % (calculated)                 |

The total contributions from above do not exceed 60%, thus adding in WTVM-DT's proposed contribution of 6.9 %, the total calculated power density will be less than 65%. Therefore, it is assumed that the proposed operation will not exceed the FCC's RFR guidelines.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed WTVM-DT operation appears to be otherwise categorically excluded from environmental processing.

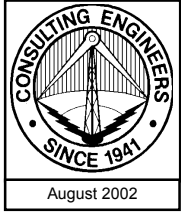


Jonathan N. Edwards

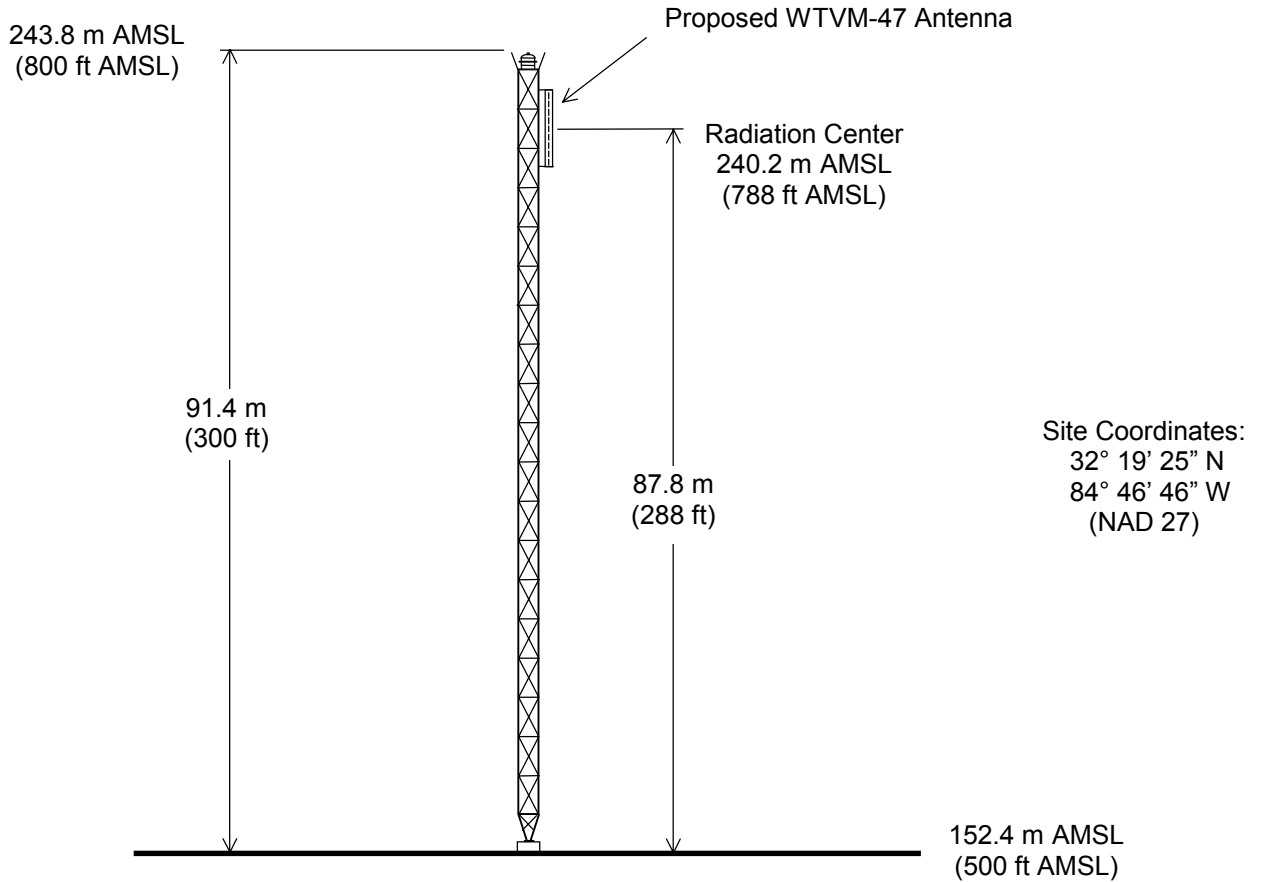
du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941) 329-6000

August 6, 2002

Figure 1



Tower Reg. No. 1235246



Not to Scale

## ANTENNA AND SUPPORTING STRUCTURE

STATION WTVM-LP  
COLUMBUS, GEORGIA

CH 47    528 KW (MAX-DA)    115 M

du Treil, Lundin & Rackley, Inc.    Sarasota, Florida



|              |                 |         |    |
|--------------|-----------------|---------|----|
| Date         | 23 Jul 2002     |         |    |
| Call Letters | WTVM-DT         | Channel | 47 |
| Location     | Columbus, GA    |         |    |
| Customer     |                 |         |    |
| Antenna Type | TFU-16DSB-M (C) |         |    |

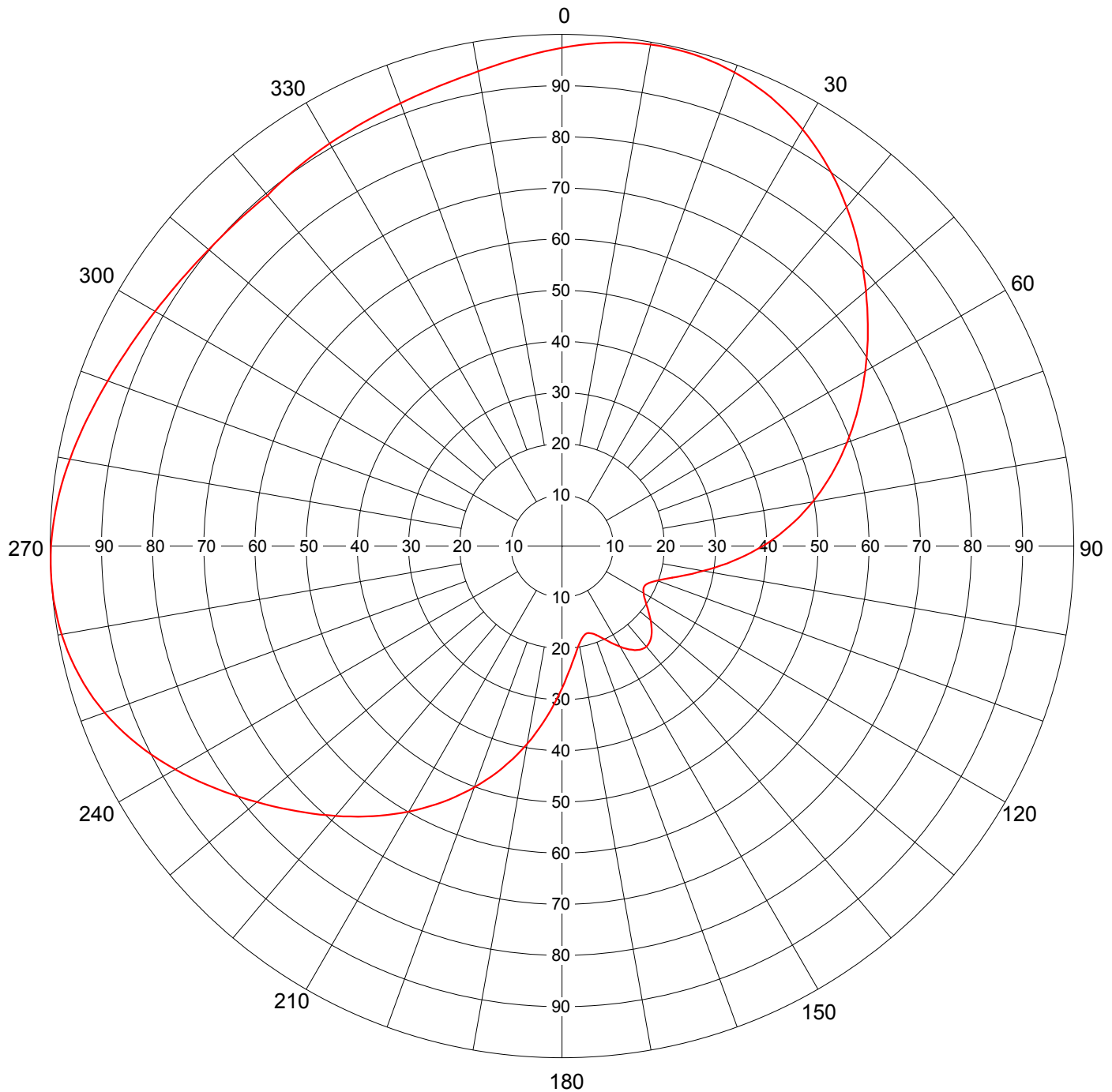
### AZIMUTH PATTERN

RMS Gain at Main Lobe  
Calculated / Measured

**1.90 (2.79 dB)**  
**Calculated**

Frequency  
Drawing #

**671 MHz**  
**DSB-M**



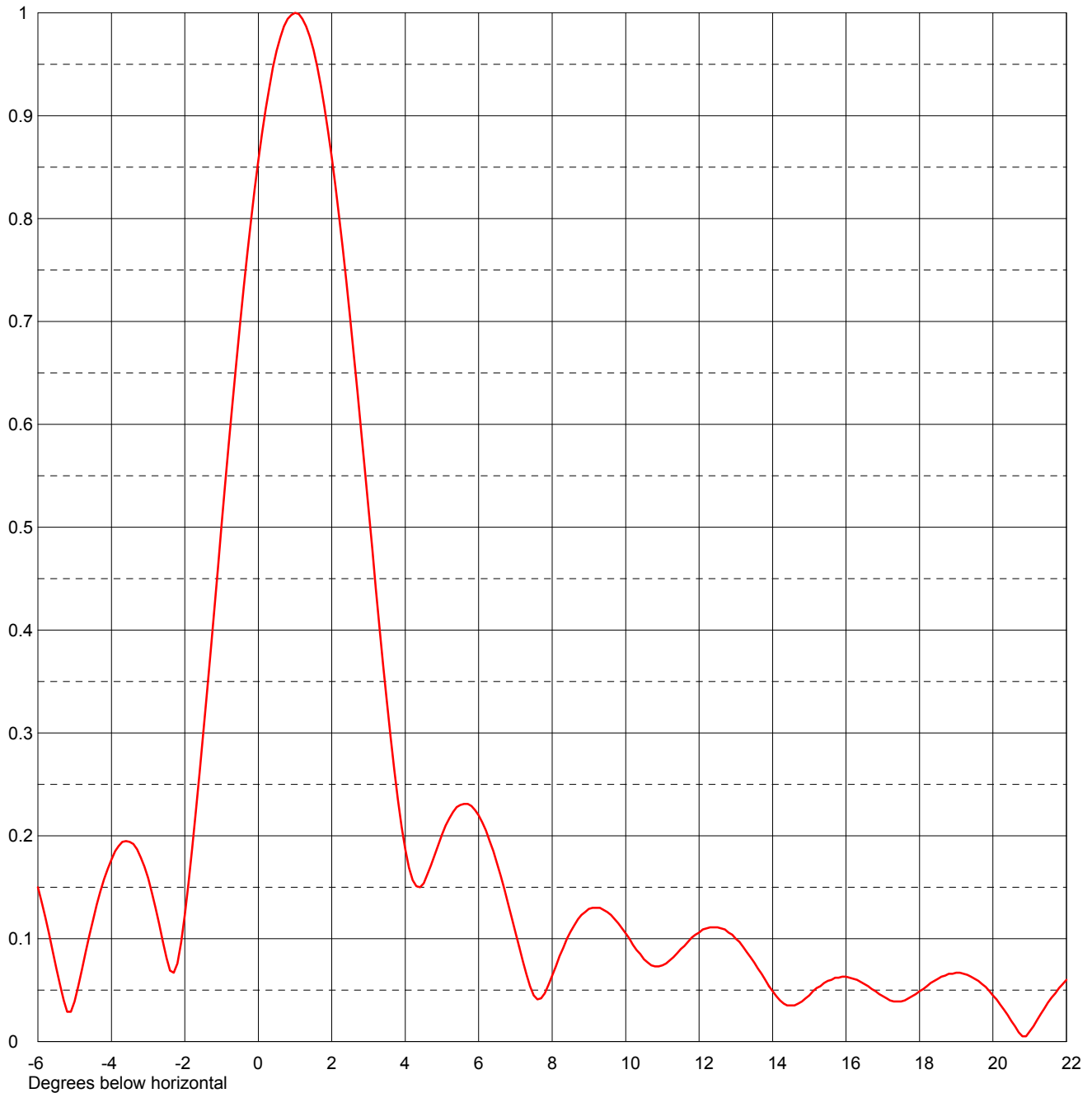
Remarks:



|              |                 |         |    |
|--------------|-----------------|---------|----|
| Date         | 23 Jul 2002     |         |    |
| Call Letters | WTVM-DT         | Channel | 47 |
| Location     | Columbus, GA    |         |    |
| Customer     |                 |         |    |
| Antenna Type | TFU-16DSB-M (C) |         |    |

### ELEVATION PATTERN

|                        |                 |           |              |
|------------------------|-----------------|-----------|--------------|
| RMS Gain at Main Lobe  | 16.0 (12.04 dB) | Beam Tilt | 1.00 Degrees |
| RMS Gain at Horizontal | 11.8 (10.72 dB) | Frequency | 671.00 MHz   |
| Calculated / Measured  | Calculated      | Drawing # | 16B160100    |



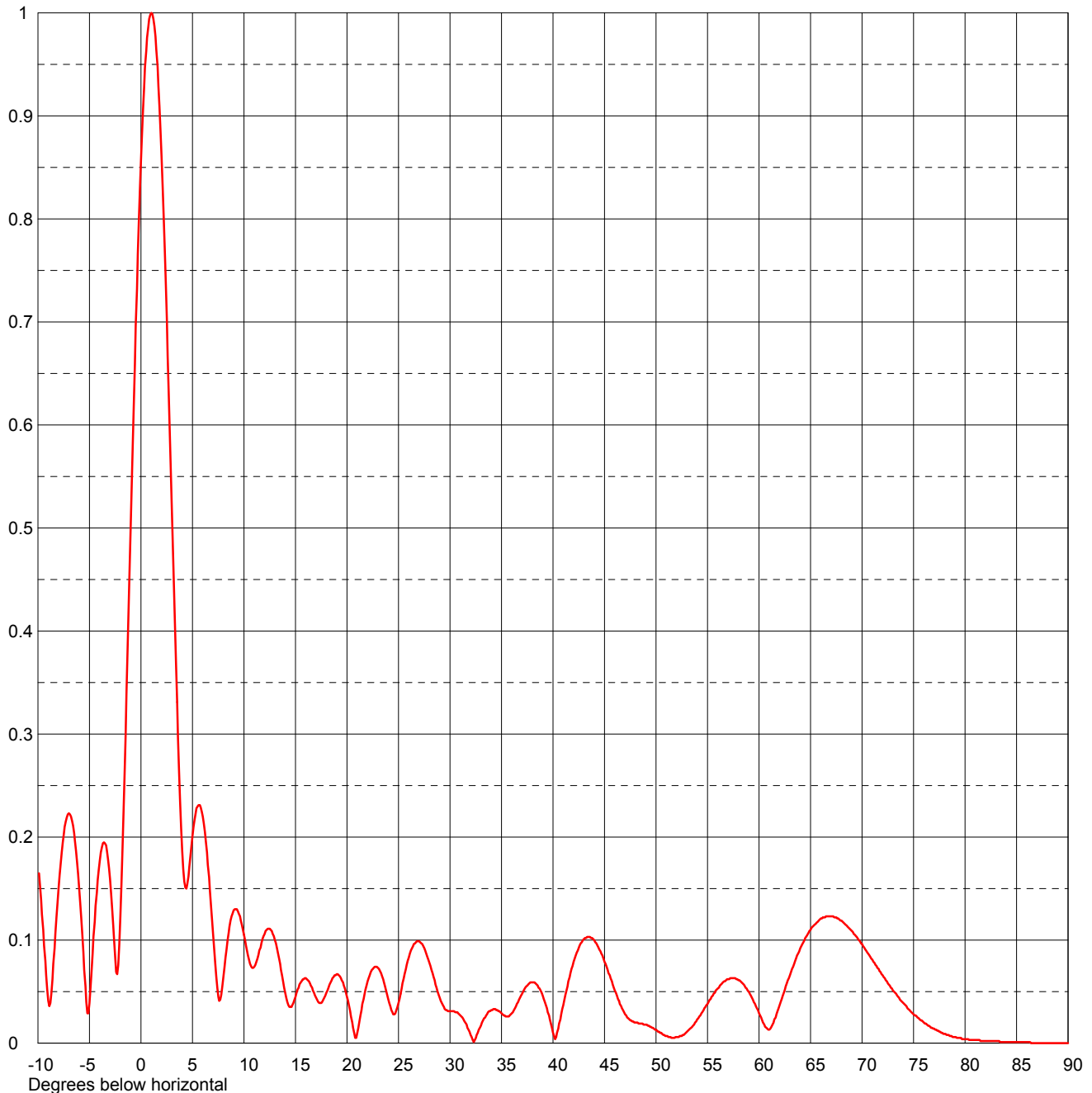
Remarks:



|              |                 |         |    |
|--------------|-----------------|---------|----|
| Date         | 23 Jul 2002     |         |    |
| Call Letters | WTVM-DT         | Channel | 47 |
| Location     | Columbus, GA    |         |    |
| Customer     |                 |         |    |
| Antenna Type | TFU-16DSB-M (C) |         |    |

### ELEVATION PATTERN

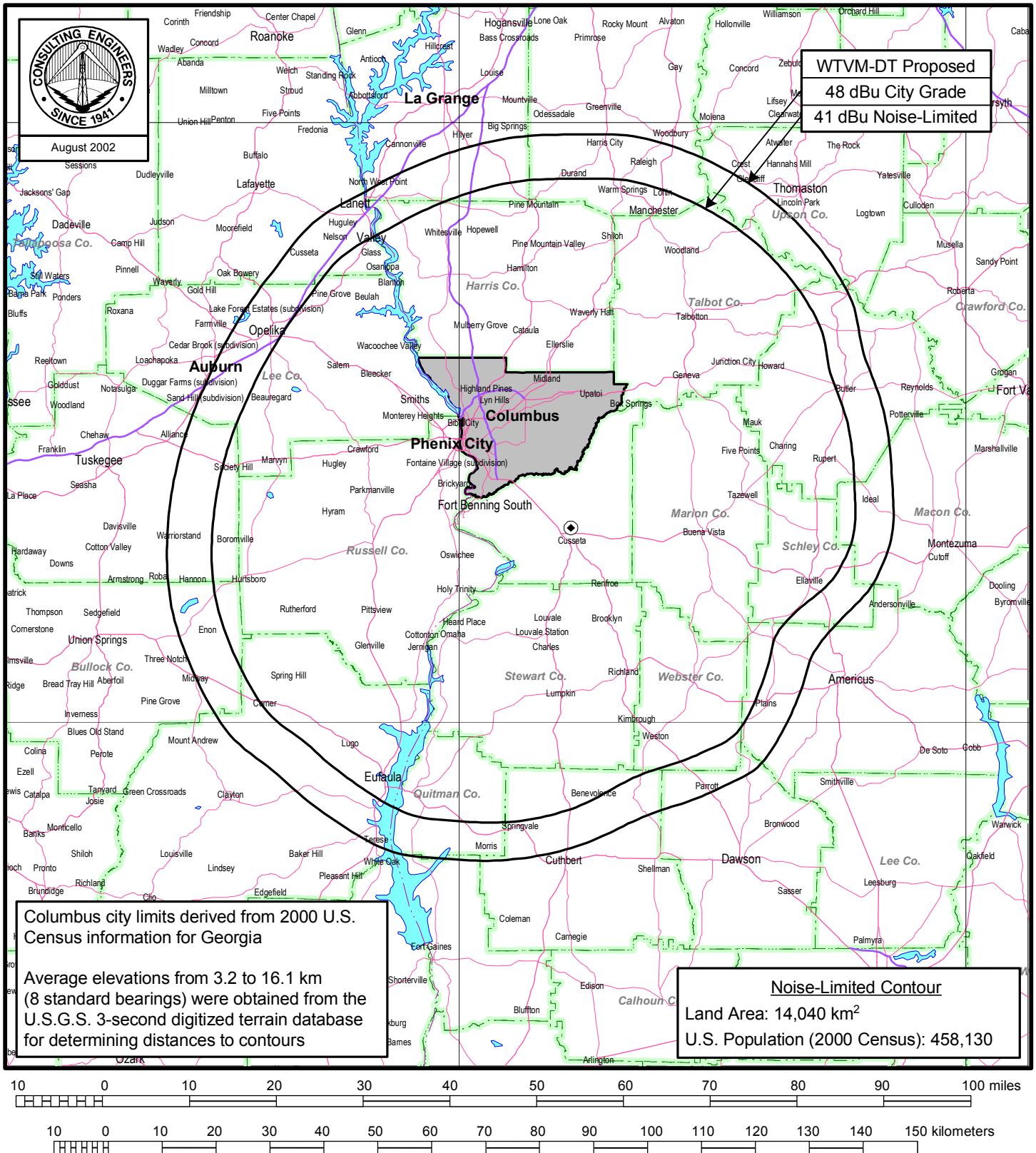
|                        |                 |           |              |
|------------------------|-----------------|-----------|--------------|
| RMS Gain at Main Lobe  | 16.0 (12.04 dB) | Beam Tilt | 1.00 Degrees |
| RMS Gain at Horizontal | 11.8 (10.72 dB) | Frequency | 671.00 MHz   |
| Calculated / Measured  | Calculated      | Drawing # | 16B160100-90 |



Remarks:



Figure 3



## PREDICTED F(50,90) COVERAGE CONTOURS

STATION WTVM-DT  
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du Treil, Lundin & Rackley, Inc Sarasota, Florida