

**ENGINEERING EXHIBIT
MINOR CHANGE IN LICENSED FACILITY
FM STATION WUMJ
FAYETTEVILLE, GEORGIA
FACILITY ID 3105**

ROA Licenses, LLC (Radio One), the licensee of FM Station WUMJ, Fayetteville, GA (File number BMLH-20021031ABB, Facility ID 3105) submits this exhibit as part of an application for a minor change in licensed facility. The instant application proposes:

1. Correction of the licensed coordinates to be in conformity with the location coordinates specified by the antenna structure registration of the existing tower presently supporting the WUMJ antenna.
2. A change in effective radiated power (ERP).
3. A change in antenna height above average terrain (HAAT).

No tower construction or relocation of the WUMJ antenna is proposed.

Proposed Facility:

The proposed antenna location coordinates are separated from other allotments, assignments and applications by not less than the minimum distances prescribed by FCC Rules Section 73.215. A Section 73.207 spacing study is shown in Figure 1.

Proposed antenna location coordinates:

33 Degrees, 30 Minutes, 13 Seconds North Latitude
84 Degrees, 34 Minutes, 58 Seconds West Longitude

Allotment:

The proposed facility provides greater than 70 dBu signal coverage of the entire community of license Fayetteville, GA as shown in Figure 2. The Class C3 allotment is presently licensed under file number BMLH-20021031ABB, and no change in station class is proposed herein.

Proposed Facility Engineering Data:

Frequency: 97.5 MHz

Channel: 248

Station class: C3

Antenna type: Non- Directional

Antenna location coordinates:

North Latitude: 33 Degrees, 30 Minutes, 13 Seconds

West Longitude: 84 Degrees, 34 Minutes, 58 Seconds

Effective radiated power in the horizontal plane: 8.50 Kilowatts

Height of radiation center above ground: 149 meters

Height of radiation center above mean sea level: 443 meters

Height of radiation center above average terrain: 165 meters

Antenna structure registration number: 1018924

Contour Protection:

The proposed antenna location coordinates are separated from other allotments, assignments and applications by not less than the minimum distances prescribed by FCC Rules Section 73.207, with the exception of the following:

1. A pending application by WGPB Rome GA, Facility ID 6797
2. The licensed facility of WKGA Goodwater AL, Facility ID 64557
3. A pending application by WSRV Gainesville GA, Facility ID 59970

This WUMJ application requests processing under Section 73.215 with respect to the following stations:

WGPB- Pending application: BPED-20130207AAU

Rome, GA

Facility ID 6797

97.7 MHZ

Channel 249

Class C3

73.215 Station

WKGA- Licensed facility: BLH-20050202ADU

Goodwater, AL

Facility ID 64557

97.5 MHZ

Channel 248

Class A

73.215 Station

Contour protection to the WGPB application and WKGA licensed facilities will be provided as shown in Figure 3, Figure 4 and Figure 5.

This WUMJ application does not request 73.215 processing towards the pending WSRV application (file BPH-20070118ACV) because on April 26, 2013 WSRV filed a minor amendment to the pending application. The amendment proposes antenna location coordinates that meet the minimum spacing distance prescribed by section 73.207 with respect to WUMJ.

WSRV- Amendment to pending application: BPH-20070118ACV

Gainesville, GA

Facility ID 59970

97.1 MHZ

Channel 246

Class C1

Not a 73.215 Station

Calculations:

A 30 second terrain data base (V-Soft 30 Second US Database) is used for calculation of the contours shown on the maps. V-Soft Probe version 3.88 was used to calculate and plot predicted coverage contours. Antenna height above average terrain (HAAT) was determined by employing the FCC website tool as shown in Figure 6. Site elevation and location coordinates were taken from the Antenna Structure Registration as shown in Figure 7. The FCC FM Model program was employed to determine radiofrequency electromagnetic power density as shown in Figure 8.

Environmental:

No physical construction or visible changes are proposed. The antenna location coordinates are the location specified on the antenna structure registration of an existing tower. The tower is an established communications site. The overall height of the tower will not be increased. Predicted radiofrequency electromagnetic power density two meters above ground level is less than five percent of the FCC guideline for uncontrolled public exposure, as shown in Figure 9.

Summary:

Radio One proposes correction of the licensed antenna coordinates of WUMJ, to be in agreement with the coordinates specified on the antenna structure registration of the tower supporting the WUMJ antenna. The corrected coordinates meet the minimum distance spacing requirements of Section 73.215, and the facility provides contour protection as required. WUMJ will become a Section 73.215 assignment with respect to WKGA Goodwater, GA and WGPB Rome, GA. Because the instant application is a coordinate correction, there will be with no physical change to the tower. The proposed electromagnetic facility is not of environmental concern, and is within FCC guidelines for uncontrolled public exposure to radiofrequency electromagnetic radiation.



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Radio One, Inc.
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Silver Spring, MD 20910
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April 29, 2013

Figure 1

Spacing study of antenna structure registration and antenna location geographical coordinates

Section 73.207 spacing study
Proposed WUMJ antenna location coordinates

REFERENCE		DISPLAY DATES
33 30 13.0 N.	CLASS = C3	DATA 04-29-13
84 34 58.0 W.	Current Spacings to 3rd Adj.	SEARCH 04-29-13
----- Channel 248 - 97.5 MHz -----		

Call	Channel	Location		Azi	Dist	FCC	Margin

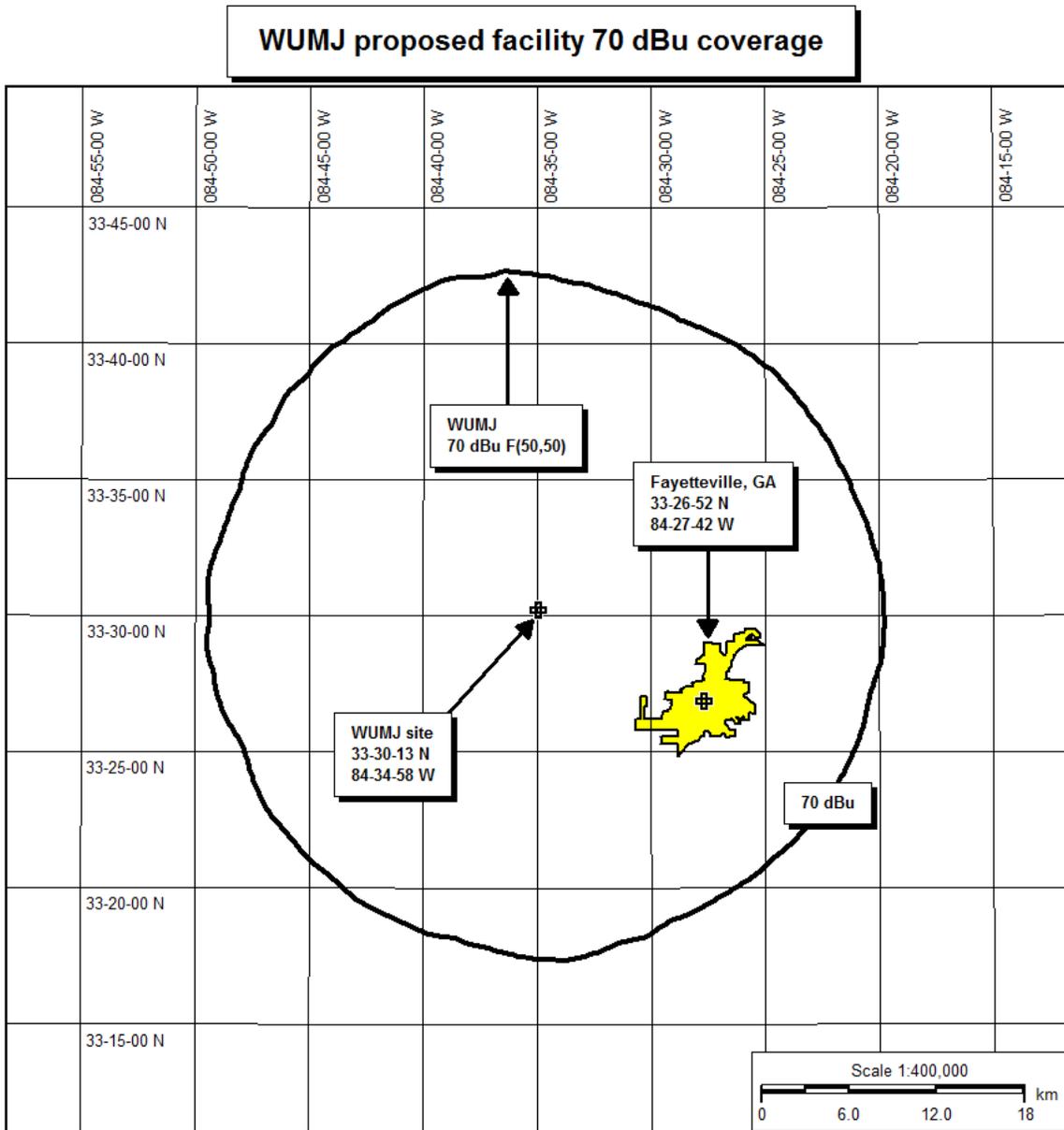
WUMJ	LIC 248C3	Fayetteville	GA	182.2	1.35	153.0	-151.7
WGPB	APP-Z 249C3	Rome	GA	336.0	90.84	99.0	-8.2
*WSRV	APP 246C0	Gainesville	GA	37.2	85.53	87.0	-1.5
*WSRV	APP 246C0	Gainesville	GA	37.2	85.53	87.0	-1.5
WKGA	LIC-Z 248A	Goodwater	AL	248.4	141.29	142.0	-0.7
WSRV	LIC 246C	Gainesville	GA	43.8	96.18	96.0	0.18
AL4100	RSV-A 248A	Goodwater	AL	249.1	142.22	142.0	0.22
WGPB	LIC-Z 249C3	Rome	GA	323.9	100.80	99.0	1.8
*WSRV	APP 246C1	Gainesville	GA	36.8	88.91	76.0	12.9
WMGZ	RSV-A 249C1	Lexington	GA	70.5	158.33	144.0	14.3
WMGP	LIC-Z 251C3	Hogansville	GA	215.6	59.81	43.0	16.8
WMGZ	APP-N 249C1	Lexington	GA	74.5	166.92	144.0	22.9
WMGZ	LIC 249C3	Eatonton	GA	97.6	127.22	99.0	28.2
WKKR	LIC 249A	Auburn	AL	215.3	127.46	89.0	38.5
WJXB-FM	LIC 248C	Knoxville	TN	11.8	284.34	237.0	47.3
WUFF-FM	LIC 248A	Eastman	GA	137.8	191.14	142.0	49.1
AL2364	RSV-A 249C2	Lexington	GA	76.5	171.78	117.0	54.8

RSV-R = reserved - needs protection, RSV-A = allocation.

- * Subject of amendment application
- ** Amendment application

Figure 2

Community of license coverage of proposed facility

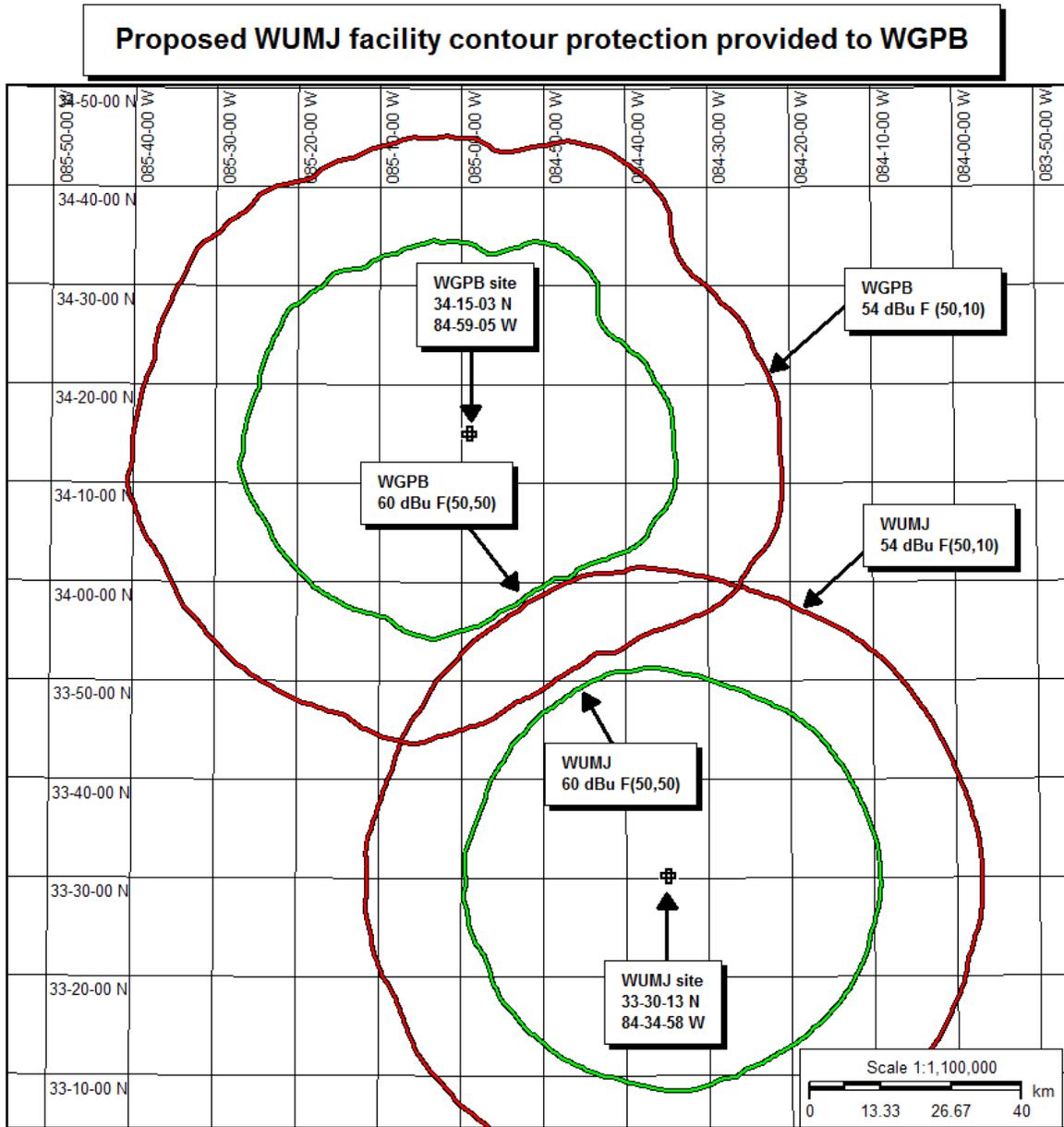


WUMJ proposed
 Latitude: 33-30-13 N
 Longitude: 084-34-58 W
 ERP: 8.50 kW
 Channel: 248
 Frequency: 97.5 MHz
 AMSL Height: 443.0 m
 Elevation: 285.142 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: FCC Model
 Loc. Variability: 50.0%
 Time Variability: 50.0%

30 second terrain database

 Map center:
 33-30-13 N
 84-34-58 W

Figure 3

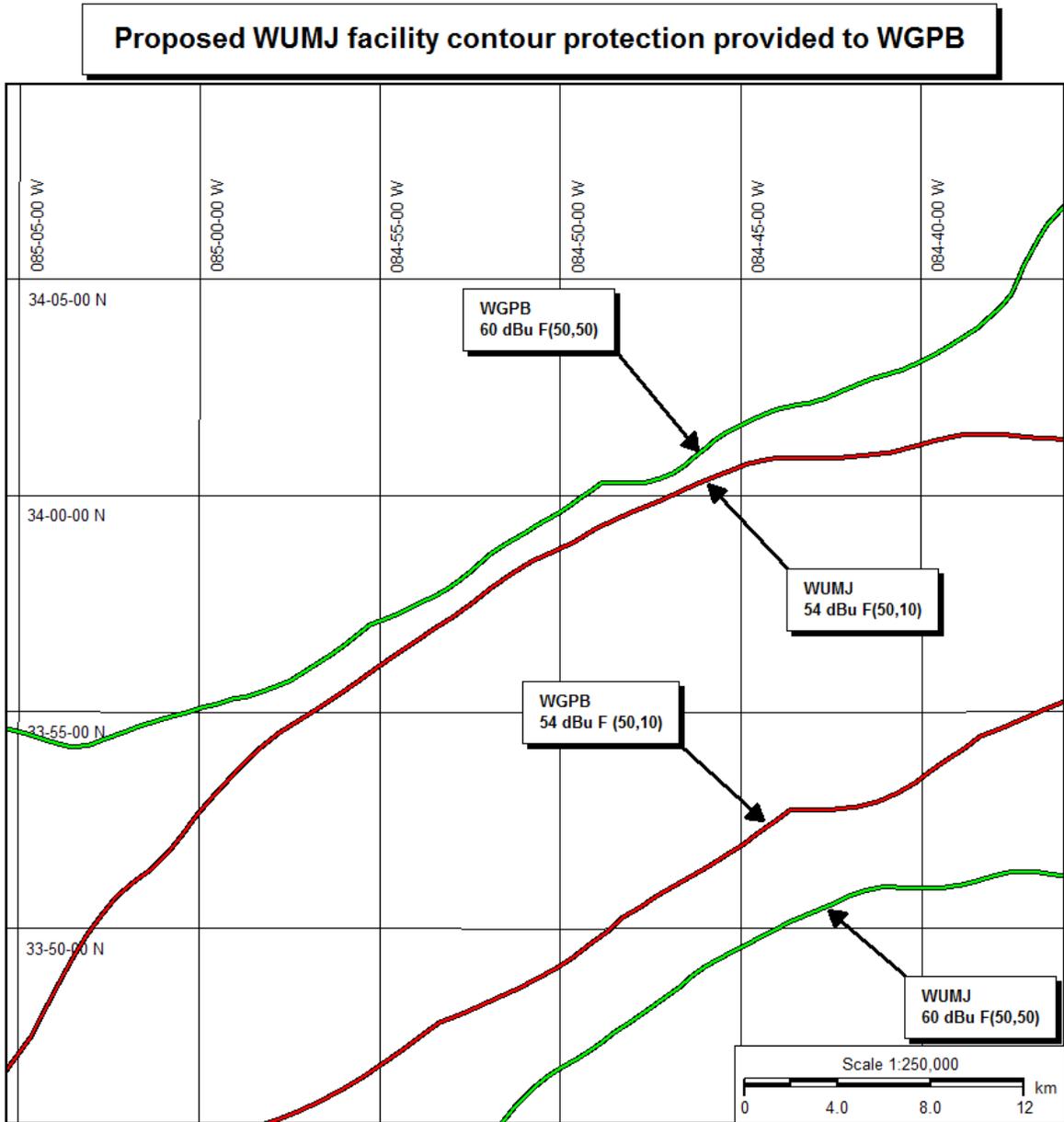


WUMJ proposed
 Latitude: 33-30-13 N
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 Frequency: 97.5 MHz
 AMSL Height: 443.0 m
 Elevation: 285.142 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: FCC Model
 Loc. Variability: 50.0%
 Time Variability: 50.0%

WGPB Application
 BPED20130207AAU
 Latitude: 34-15-03 N
 Longitude: 084-59-05 W
 ERP: 17.50 kW
 Channel: 249
 Frequency: 97.7 MHz
 AMSL Height: 360.5 m
 Elevation: 228.0 m
 Horiz. Pattern: Directional
 Vert. Pattern: No
 Prop Model: FCC Model
 Loc. Variability: 50.0%
 Time Variability: 50.0%

30 second terrain database
 Map center:
 33-57-30 N
 84-50-41 W

Figure 4



WUMJ proposed
 Latitude: 33-30-13 N
 Longitude: 084-34-58 W
 ERP: 8.50 kW
 Channel: 248
 Frequency: 97.5 MHz
 AMSL Height: 443.0 m
 Elevation: 285.142 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: FCC Model
 Loc. Variability: 50.0%
 Time Variability: 50.0%

WGPB Application
 BPED20130207AAU
 Latitude: 34-15-03 N
 Longitude: 084-59-05 W
 ERP: 17.50 kW
 Channel: 249
 Frequency: 97.7 MHz
 AMSL Height: 360.5 m
 Elevation: 228.0 m
 Horiz. Pattern: Directional
 Vert. Pattern: No
 Prop Model: FCC Model
 Loc. Variability: 50.0%
 Time Variability: 50.0%

30 second terrain database
 Map center:
 33-57-30 N
 84-50-41 W

Figure 5

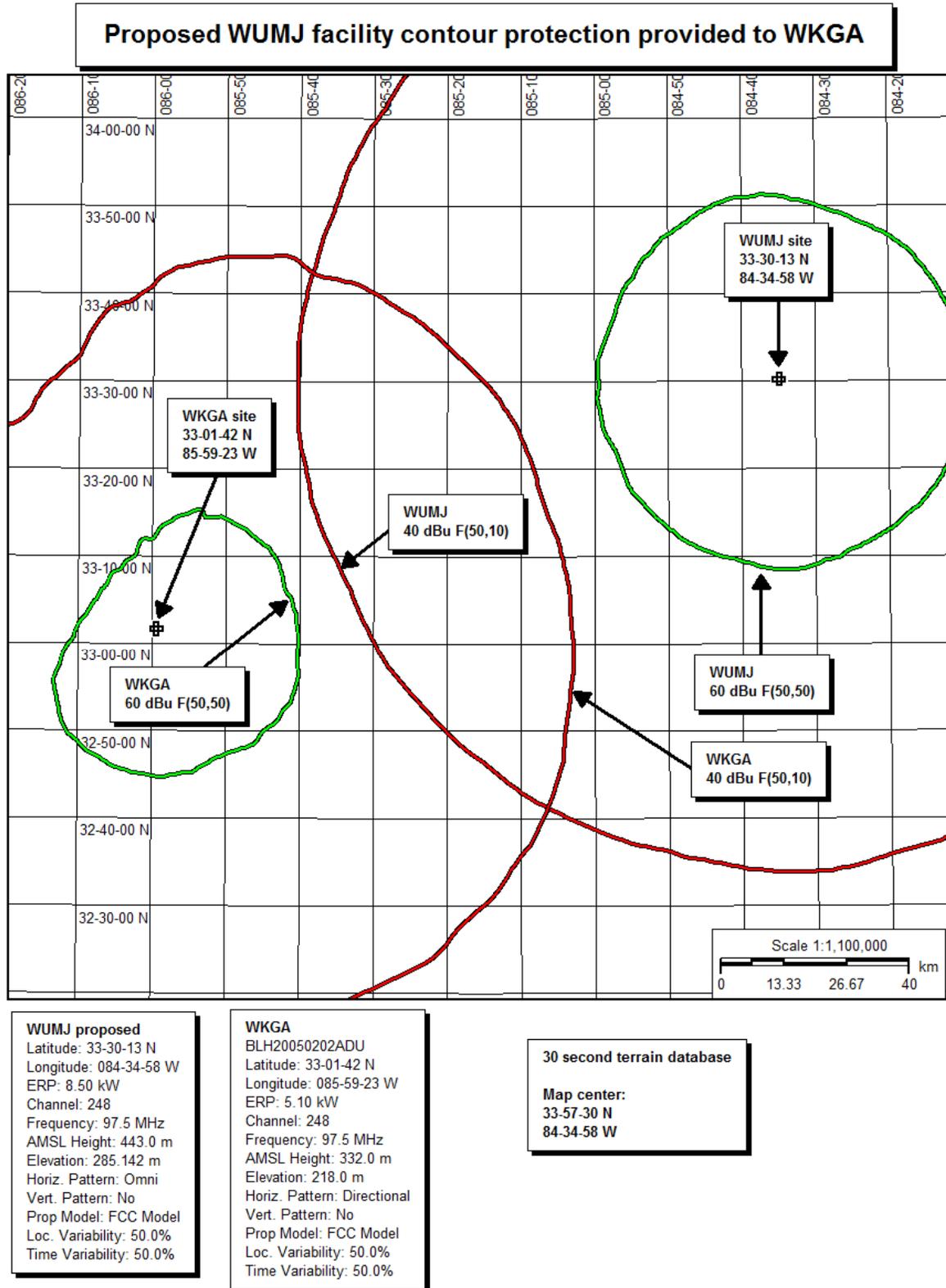


Figure 6 HAAT Calculation

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Audio Division **Antenna Height Above Average Terrain (HAAT) / Contour Calculations** 

(202)-418-2700 [FCC > MB > Audio Division > HAAT/Contour Calculations](#) [FCC site map](#)

Antenna Height Above Average Terrain Calculations -- Input

Latitude **33 30 13.0 North**
Longitude **84 34 58.0 West** (NAD 27)

Height of antenna radiation center above mean sea level [RCAMSL] = **443.0** meters

Number of Evenly Spaced Radials = 12 0° is referenced to True North

Results:

Calculated HAAT= 165. meters

(Antenna Height Above Average Terrain)
using 1 km GLOBE terrain data)

Antenna Radiation Center Heights Above Individual Radials:

0.0°	160.3 meters
30.0°	150.9 meters
60.0°	163.2 meters
90.0°	172.8 meters
120.0°	174.5 meters
150.0°	172.4 meters
180.0°	179.4 meters
210.0°	171.6 meters
240.0°	155.6 meters
270.0°	159.4 meters
300.0°	157.8 meters
330.0°	156.7 meters

[New Antenna Height Above Average Terrain \(HAAT\) calculation?](#)

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Figure 7

Antenna Structure Registration information



**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
ANTENNA STRUCTURE REGISTRATION**



OWNER: American Towers, LLC.

FCC Registration Number (FRN): 0011498342

ATTN: FAA / FCC TEAM American Towers, LLC. 1898 LELAND DRIVE, SUITE A MARIETTA, GA 30067	Antenna Structure Registration Number <p style="text-align: right;">1018924</p>						
	Issue Date <p style="text-align: right;">10/05/2010</p>						
Location of Antenna Structure 1814 N HWY 74 (026004 / Tyrone Cook Road) TYRONE, GA 30290 FAYETTE	Ground Elevation (AMSL) <p style="text-align: right;">294.1 meters</p>						
	Overall Height Above Ground (AGL) <p style="text-align: right;">152.4 meters</p>						
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Latitude</td> <td style="text-align: center;">Longitude</td> <td style="text-align: center;">NAD83</td> </tr> <tr> <td style="text-align: center;">33° 30' 13.3" N</td> <td style="text-align: center;">084° 34' 58.2" W</td> <td></td> </tr> </table>	Latitude	Longitude	NAD83	33° 30' 13.3" N	084° 34' 58.2" W		Overall Height Above Mean Sea Level (AMSL) <p style="text-align: right;">446.5 meters</p>
Latitude	Longitude	NAD83					
33° 30' 13.3" N	084° 34' 58.2" W						
Painting and Lighting Requirements: FAA Chapters 4, 8, 12 Paint and Light in Accordance with FAA Circular Number 70/7460-1K Conditions:							

Figure 8

FM Model RFR of proposed facility

