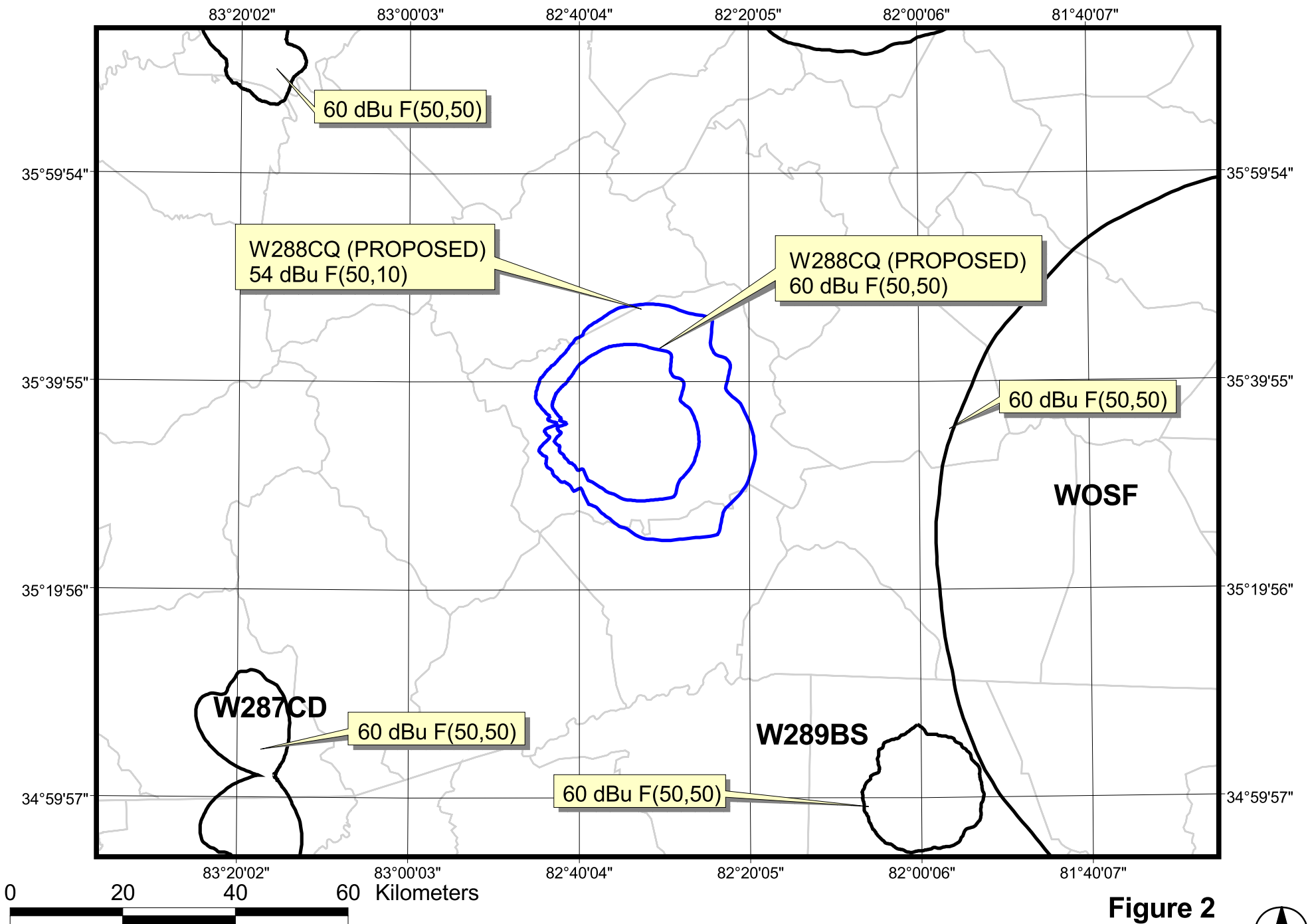


**W288CQ , WAYNESVILLE, NC: MINOR CHANGE TO LICENSED FACILITY**  
**Co-Channel Study**

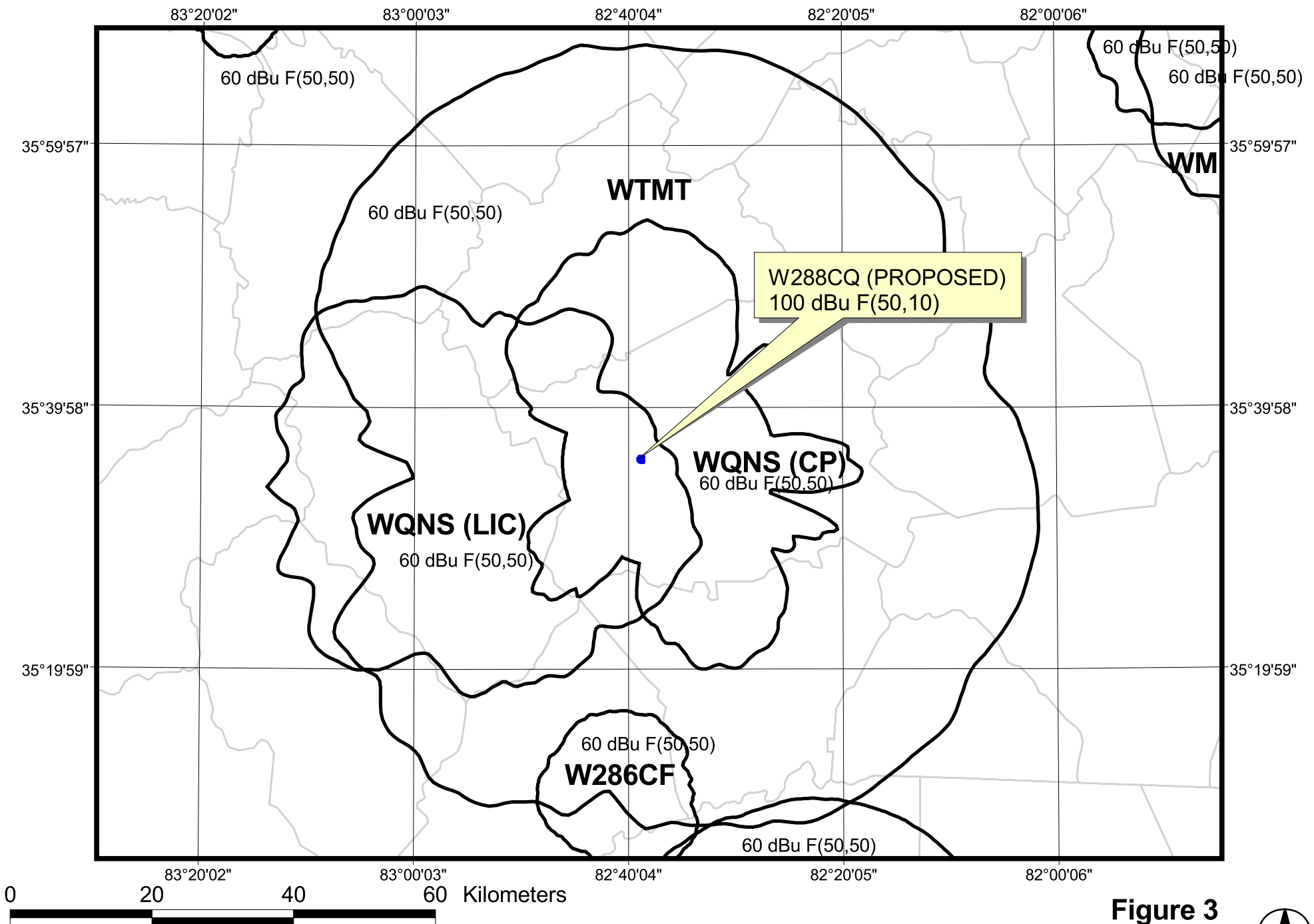
**Figure 1**





**W288CQ , WAYNESVILLE, NC: MINOR CHANGE TO LICENSED FACILITY**  
**1st Adjacent Channel Study**

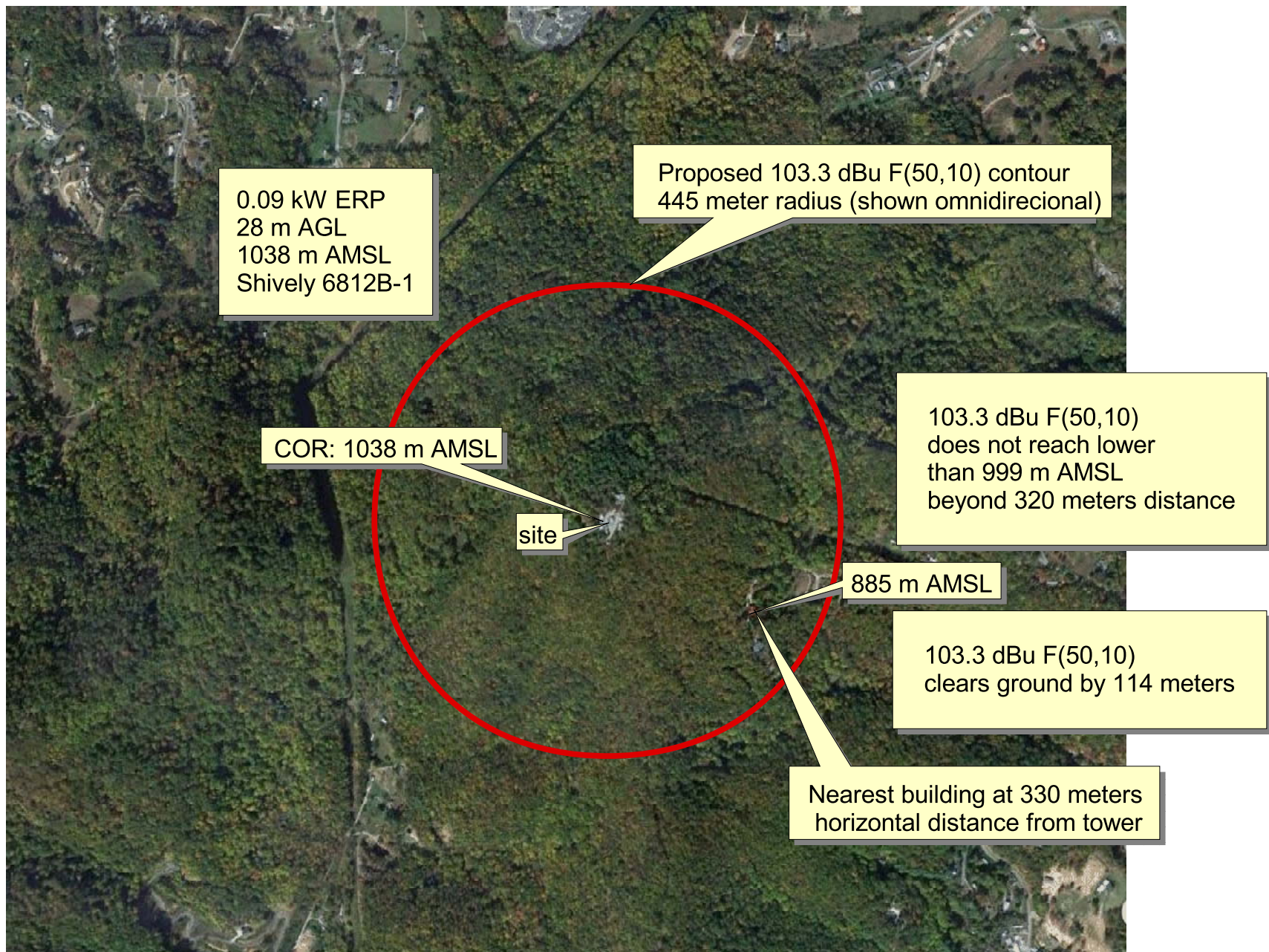
**Figure 2**



**Figure 3**

**W288CQ , WAYNESVILLE, NC: MINOR CHANGE TO LICENSED FACILITY**  
**2nd and 3rd Adjacent Channel Study**

**Radio Data Services**



**W288CQ , WAYNESVILLE, NC: MINOR CHANGE TO LICENSED FACILITY**  
**103.3 dBu F(50,10) with respect to WQNS (LIC)**  
**Showing structures within 103.3 dBu F(50,10) contour and elevation AMSL**

**Figure 4**





**Table 1**

**W288CQ, MINOR CHANGE TO LICENSED FACILITY**

**Channel Study**

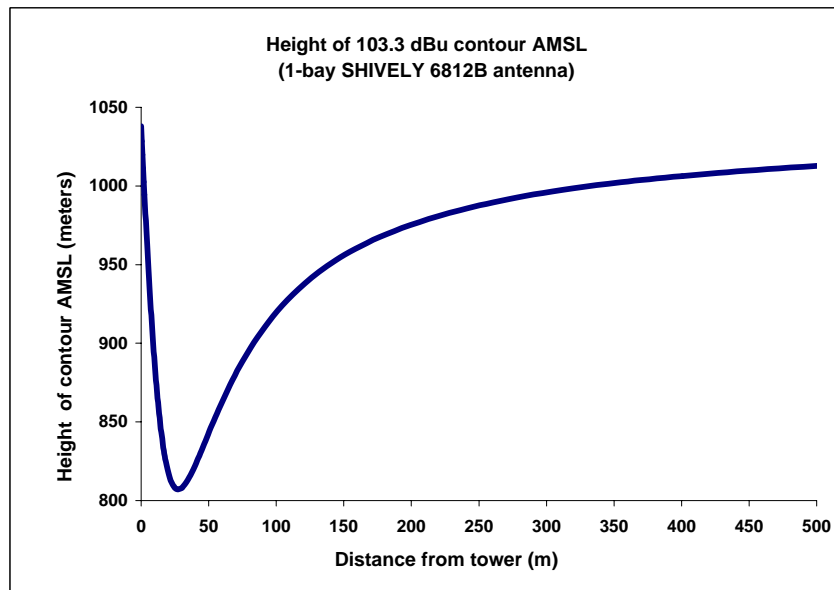
Chan	Class	Call Letters	Type	Status	City	State	Country	Owner	Distance (km)	Bearing TO (deg)	Req. Dist. (km)	Clearance (km)
235 C0	WAEZ	FM	LIC		GREENEVILLE	TN	US	BRISTOL BROADCASTING	52.9	356.2	25.0	27.9
286 A	WQNS	FM	CP		WOODFIN	NC	US	CLEAR CHANNEL BROADCASTING	4.2	95.6	15.6	-11.4 (See Note)
285 A	WQNS	FM	LIC		WAYNESVILLE	NC	US	CLEAR CHANNEL BROADCASTING	23.4	261.2	28.3	-4.9 (See Note)
288 A	WSEV-FM	FM	LIC		GATLINBURG	TN	US	EAST TENNESSEE RADIO	83.4	278.1	36.0	47.4
287 C1	WOSF	FM	LIC		GAFFNEY	SC	US	GAFFNEY BROADCASTING	135.2	100.8	101.7	33.5
288 D	W288CQ	FX	CP		WAYNESVILLE	NC	US	GEORGIA-CAROLINA RADIO	46.0	247.2	67.6	-21.6 (same as applicant)
288 D	W288CR	FX	CP		CASHIERS	NC	US	GEORGIA-CAROLINA RADIO	65.7	218.1	52.0	13.7
288 C3	WCCP-FM	FM	CP		CLEMSON	SC	US	GOLDEN CORNERS BROADCASTING	107.3	182.8	66.4	40.9
289 D	NEW	FX	APP		BRISTOL	TN	US	HOLSTON VALLEY BROADCASTING	103.3	26.5	57.4	45.8
289 D	NEW	FX	APP		BRISTOL	TN	US	HOLSTON VALLEY BROADCASTING	103.3	26.5	57.4	45.8
290 C2	WTMT	FM	LIC		WEAVERVILLE	NC	US	SAGA COMMUNICATIONS	0.0	314.5	57.2	-57.2 (See Note)
235 D	NEW	FX	APP		BREVARD	NC	US	TABERNACLE BAPTIST CHURCH	44.3	184.1	0.0	44.3
289 D	W289BS	FX	LIC		SPARTANBURG	SC	US	TED A MCCALL	87.1	137.8	37.2	49.9
286 D	W286CF	FX	LIC		BREVARD	NC	US	WESTERN NORTH CAROLINA	47.3	183.3	11.9	35.4

**NOTE: (SEE FIGURE 4)**

(with respect to WQNS-LIC) 3rd adjacent WQNS (LIC) has a field strength of 63.3 dBu F(50,50) at the proposed site. Therefore the proposed translator's interfering contour is the 103.3 dBu F(50,10) contour. Using a SHIVELY 6812B 1-bay antenna at 28 meters AGL, the proposed translator's 103.3 dBu F(50,10) does not fall lower than 999 meters AMSL beyond 320 meters horizontal distance from the tower and will clear all nearby structures at lower elevation (See Figure 4). Therefore this proposal is compliant with the allowance of Rule 74.1204(d).

(with respect to WQNS-CP) 3rd adjacent WQNS-CP has a field strength of 81.9 dBu F(50,50) at the proposed site. Therefore the proposed translator's interfering contour is the 121.9 dBu F(50,10) contour which would have less of an impact than WQNS-LIC (worst case).

(with respect to WTMT) 2nd adjacent WTMT (LIC) has a field strength of 120.0 dBu F(50,50) at the proposed site. Therefore the proposed translator's interfering contour is the 160.0 dBu F(50,10) contour which would have less of an impact than WQNS-LIC (worst case).



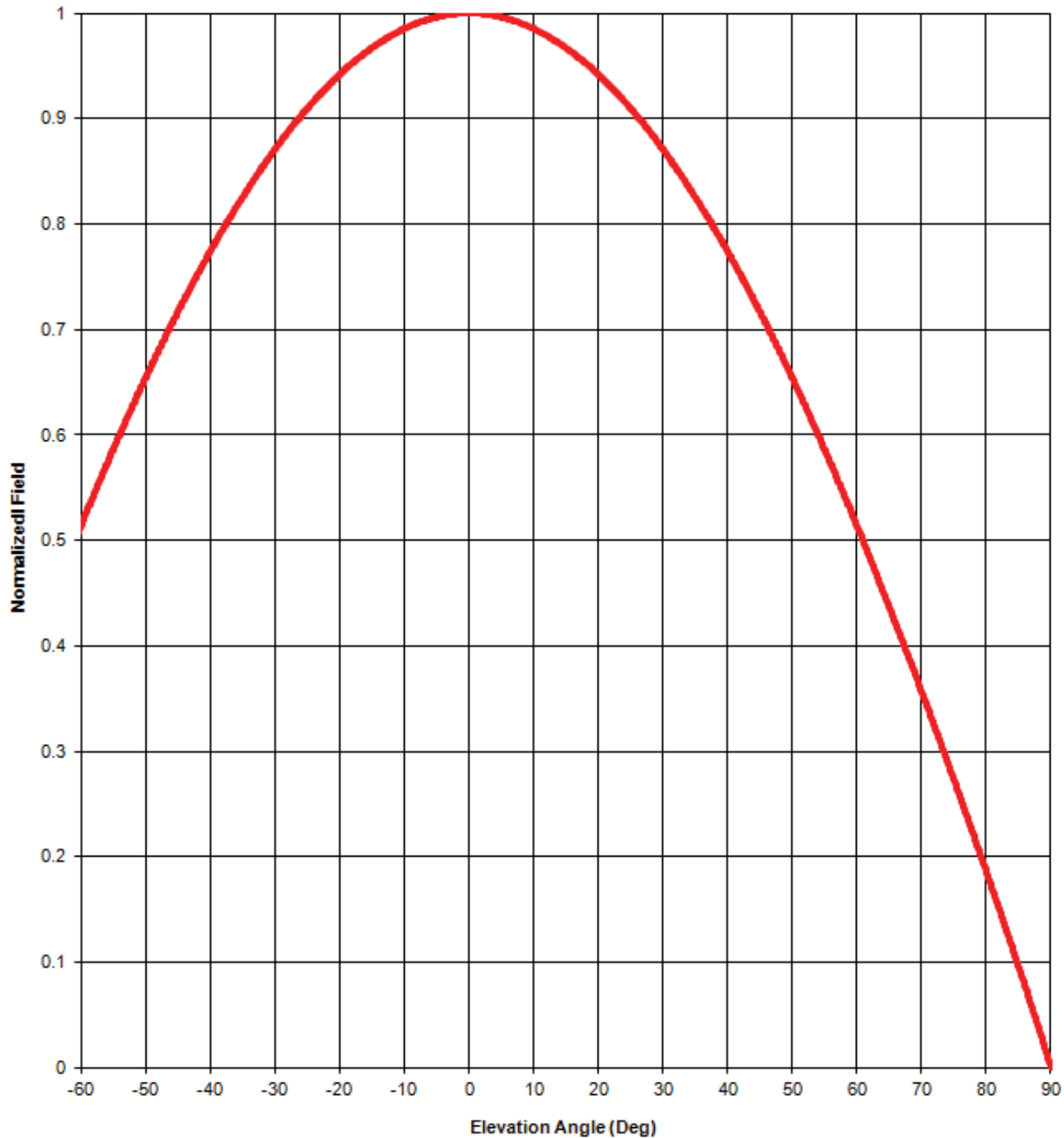
## Radiofrequency Electromagnetic Exposure Analysis

Source	Height AGL(m)	Antenna type	Bays	Horizontal ERP (kw)	Vertical ERP (kw)	Power Density $\mu\text{W}/\text{cm}^2$ at 2 meters AGL				
						within 10 meters distance	% controlled environment limit (1000 $\mu\text{W}/\text{cm}^2$ )	Max. PD	% uncontrolled environment limit (200 $\mu\text{W}/\text{cm}^2$ )	Distance to maximum PD (m)
WOXL-FM	54.0	SHI-6014-3HW	3	2.10	2.10	0.2	0.020%	2.2	1.10%	152
NEW-FX	38.0	(EPA dipole)	1	0.01	0.01	2.4	0.240%	2.4	1.20%	4
NEW-FX	18.0	(EPA dipole)	1	0.02	0.02	3.0	0.300%	0.3	0.15%	10
WTMT	54.0	SHI-6014-3HW	3	9.50	9.50	0.7	0.070%	9.7	4.85%	152
W251AO	24.0	(EPA dipole)	1	0.25	0.25	21.0	2.100%	21.0	10.50%	6
W220CD	41.0	(EPA dipole)	1	0.01	0.01	0.3	0.030%	0.3	0.15%	10
WLFA	8.0	(EPA dipole)	1	0.44	0.44	490.0	49.000%	35.0	17.50%	30
W288CQ (proposed)	28.0	SHI 6812B-1	1	0.09	0.09	0.8	0.080%	1.9	0.95%	27
						518.40	51.8%	72.8	36.4%	152

The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

Calculations made using FCC FMModel

## Elevation pattern



Antenna model: 6812b, single bay

Test frequency: 98.1 MHz

Gain (maximum):

Power	dB
0.46	-3.39 dB

Document No. 6812b 1-bay fw (130701)

A Division of Howell Laboratories, Inc., P. O. Box 389, Bridgton, Maine 04009 USA

(207) 647-3327

1-888-SHIVELY

Fax: (207)647-8273

An Employee-Owned Company

www.shively.com

sales@shively.com

Certified to ISO-9001

Degrees	Rel. Field
1	1.000
2	0.999
3	0.999
4	0.998
5	0.996
6	0.995
7	0.993
8	0.991
9	0.988
10	0.985
11	0.982
12	0.979
13	0.975
14	0.971
15	0.967
16	0.963
17	0.958
18	0.953

Degrees	Rel. Field
19	0.948
20	0.942
21	0.936
22	0.930
23	0.924
24	0.917
25	0.910
26	0.903
27	0.895
28	0.887
29	0.879
30	0.871
31	0.862
32	0.854
33	0.845
34	0.835
35	0.826
36	0.816

Degrees	Rel. Field
37	0.806
38	0.796
39	0.785
40	0.774
41	0.763
42	0.752
43	0.741
44	0.729
45	0.717
46	0.705
47	0.693
48	0.680
49	0.667
50	0.654
51	0.641
52	0.628
53	0.614
54	0.600

Degrees	Rel. Field
55	0.586
56	0.572
57	0.558
58	0.544
59	0.529
60	0.514
61	0.499
62	0.484
63	0.469
64	0.453
65	0.437
66	0.422
67	0.406
68	0.390
69	0.373
70	0.357
71	0.341
72	0.324

Degrees	Rel. Field
73	0.307
74	0.290
75	0.273
76	0.256
77	0.239
78	0.221
79	0.204
80	0.186
81	0.168
82	0.151
83	0.133
84	0.114
85	0.096
86	0.078
87	0.059
88	0.040
89	0.021
90	0.000

## Elevation Pattern Tabulation

Antenna model: 6812b, single bay

Relative Field at 0° Depression = 1.000