

# Non-Interference Compliance Study

Glory Communications, Inc.  
W242CR (Facility ID: 138369)

This exhibit demonstrates compliance with all contour overlap and interference protection requirements and demonstrates full compliance with 47 C.F.R. §74.1204.

Applicant certifies that should any actual interference occur it will promptly cease operation in accordance with 47 C.F.R. §74.1203.

Below is a listing of area stations whose contours are less than 25 km clear of the proposed translator.

Callsign	State	City	Channel	ERP (kW)	Class	Status	Distance (km)	Clr (km)
<b>WTCB</b>	<b>SC</b>	<b>Orangeburg</b>	<b>294</b>	<b>100</b>	<b>C1</b>	<b>LIC</b>	<b>31.02</b>	<b>-34.15</b>
<b>WNKT</b>	<b>SC</b>	<b>Eastover</b>	<b>298</b>	<b>40</b>	<b>C2</b>	<b>LIC</b>	<b>40.08</b>	<b>-13.5</b>

Note: W242CR is proposing a change from channel 242 to the Intermediate Frequency Channel 296. Further, applicant requests that the existing construction permit for W242CR (BPFT-20161219AAI) be dismissed upon the grant of this application.

W420AX (Fac. ID 5187) has simultaneously filed an application modifying the W240AX License from channel 240 to channel 241. Applicant requests that the two applications be treated as contingent applications and should be coordinated in processing.

The only stations that are of concern are WTCB and WNKT. WTCB is a second adjacent Class C1 that requires that a minimum of 40 dB separation exist between its service contour and W242CR's interference contour. WNKT is a second adjacent ClassC2 that requires that a minimum of 40 dB separation exist between its service contour and W242CR's interference contour. The following pages demonstrate that the W242CR application is in compliance with these requirements.

## Compliance with 47 C.F.R. §74.1204(d)

All Authorized second adjacent stations with which the proposed translator's contour overlaps their service contour are listed below. The table lists the minimum signal level of the primary station's service contour that reaches the proposed tower site for W242CR.

Facility ID	Call Sign	Contour at Tower F(50,50)
4667	WTCB	76.6 dBu
38900	WNKT	66.2 dBu

Minimum protected contour signal level at W242CR's proposed tower site: **66.2 dBu**

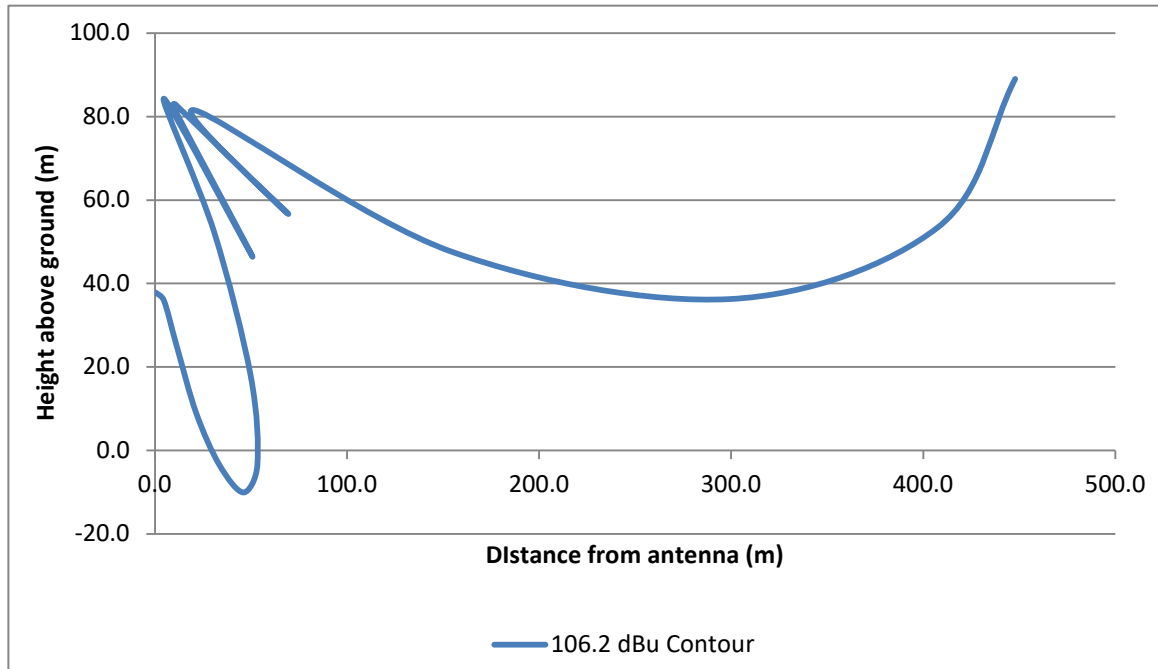
This study will use the minimum contour of 66.2 dBu to represent a worst-case potential interference level. At 40 dB above 66.2 dBu, the translator interference contour is 106.2 dBu. Calculation of distance at this power and signal level requires the use of the free-space calculation due to the distance being less than 1.5 km.

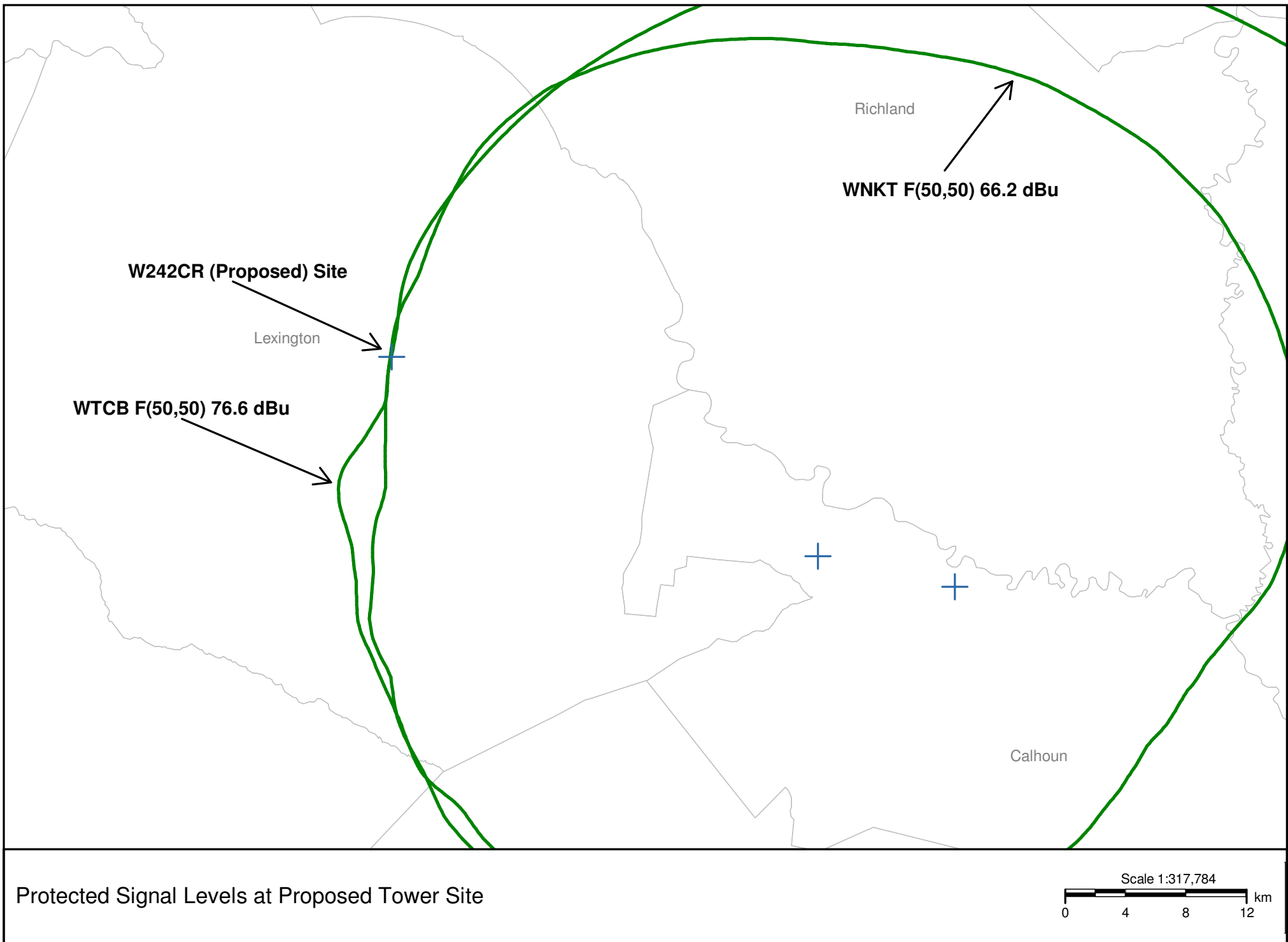
The following table uses the free space formula to calculate the worst-case height above ground level. At 106.2 dBu and 170 watts the interference contour extends to 49.8 m from the tower site. A satellite image is attached to show that no houses or businesses are within the 49.8 m interference area.

## §74.1204(d) Contour Protection Study W242CR vs WNKT

Antenna: Nicom BKG 77 - 3 Bay/0.85-Wave ERP (watts): 170  
 Protected Contour at tower - F(50,50): 66.2 dBu RC-AGL (m): 89  
 Interference Ratio: 40 dB Relative field at Azimuth: 1.000  
 Interference Contour - F(50,10): 106.2 dBu ERP (watts) at Azimuth: 170

DEPRESSION ANGLE	RELATIVE FIELD	ERP (WATTS)	dBk	DISTANCE (m)		
				Contour	Horizontal	AGL
0	1.000	170.0	-7.70	447.9	447.9	89.0
5	0.913	141.7	-8.49	409.0	407.4	53.4
10	0.678	78.1	-11.07	303.7	299.1	36.3
15	0.357	21.7	-16.64	159.9	154.5	47.6
20	0.049	0.4	-33.89	21.9	20.6	81.5
25	0.171	5.0	-23.04	76.6	69.4	56.6
30	0.027	0.1	-39.07	12.1	10.5	83.0
35	0.025	0.1	-39.74	11.2	9.2	82.6
40	0.148	3.7	-24.29	66.3	50.8	46.4
45	0.015	0.0	-44.17	6.7	4.8	84.2
50	0.107	1.9	-27.11	47.9	30.8	52.3
55	0.194	6.4	-21.94	86.9	49.8	17.8
60	0.238	9.6	-20.16	106.6	53.3	-3.3
65	0.244	10.1	-19.95	109.3	46.2	-10.1
70	0.220	8.2	-20.85	98.5	33.7	-3.6
75	0.185	5.8	-22.35	82.9	21.4	9.0
80	0.145	3.6	-24.47	65.0	11.3	25.0
85	0.119	2.4	-26.18	53.3	4.6	35.9
90	0.114	2.2	-26.56	51.1	0.0	37.9
<b>WORST CASE HEIGHT AGL (m)</b>						<b>-10.1</b>





Protected Signal Levels at Proposed Tower Site



## W242CR Interference Area

49.2 meter interference area

