

# Non-Interference Compliance Study

## Alpha Media Licensee, LLC

### K221BI (Facility ID: 28633)

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.

This study uses the NED 3 second terrain dataset.

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>KLTH</b>	<b>OR</b>	<b>Lake Oswego</b>	<b>294</b>	<b>100</b>	<b>C</b>	<b>LIC</b>	<b>0</b>	<b>-95.48</b>
<b>KFBW</b>	<b>WA</b>	<b>Vancouver</b>	<b>290</b>	<b>22.5</b>	<b>C1</b>	<b>LIC</b>	<b>1.22</b>	<b>-71.86</b>
KLOO-FM	OR	Corvallis	292	100	C	LIC	105.47	1.3
K292GO	OR	Mosier	292	0.055	D	CP	103.33	9.85

The only stations that are of concern are KLTH and KFBW. KLTH is a second adjacent Class C that requires that a minimum of 40 dB separation exist between its service contour and K221BI's interference contour. KFBW is a second adjacent Class C1 that requires that a minimum of 40 dB separation exist between its service contour and K221BI's interference contour. K221BI and KLTH are located on the same tower so it is therefore impossible for K221BI to interfere with KLTH. The following pages demonstrate that this proposal 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 K221BI.

Facility ID	Call Sign	Contour at Tower F(50,50)
60640	KFBW	118.7 dBu

Minimum protected contour signal level at K221BI's proposed tower site: **118.7 dBu**

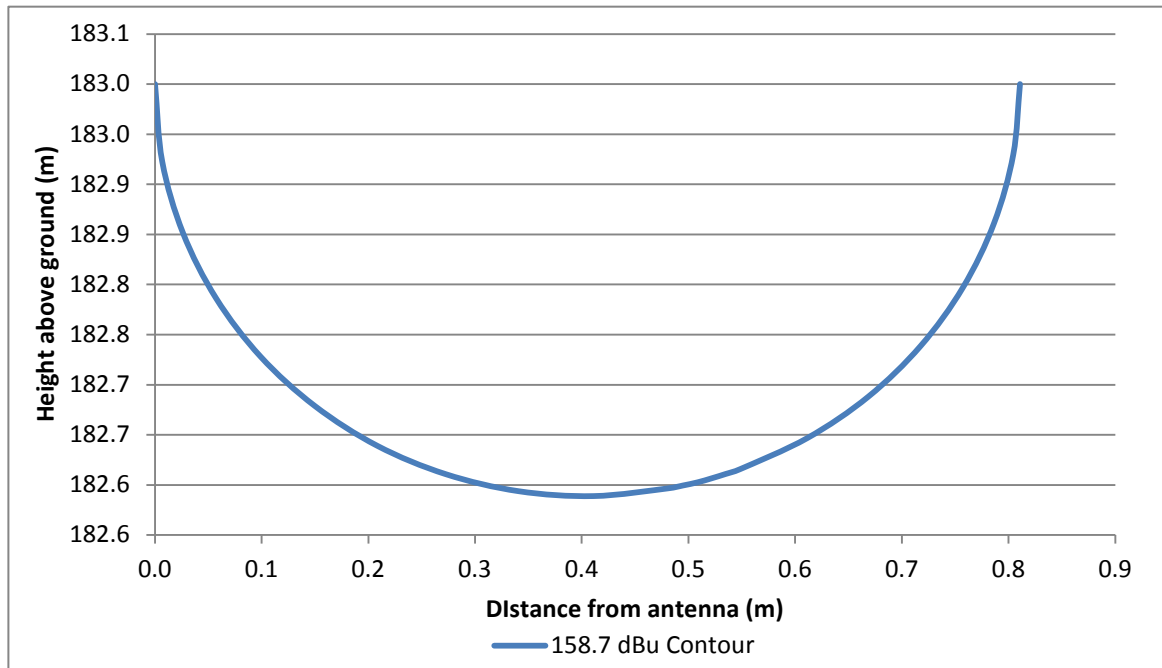
This study will use the minimum contour of 118.7 dBu to represent a worst-case potential interference level. At 40 dB above 118.7 dBu, the translator interference contour is 158.7 dBu. Calculation of distance at this power and signal level requires the use of the free-space calculation due to the distance being less than 1.5 km.

The following table uses the free space formula to calculate the worst-case height above ground level. At 158.7 dBu and 99 watts no interference is predicted to reach the ground.

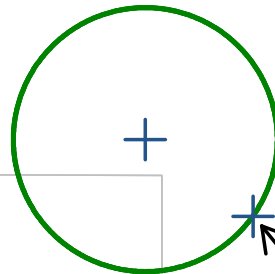
## §74.1204(d) Contour Protection Study K221BI vs. KFBW

Antenna: Shively 6832 - Single Bay ERP (watts): 99  
 Protected Contour at tower - F(50,50): 118.7 dBu RC-AGL (m): 183  
 Interference Ratio: 40 dB Relative field at Azimuth: 1.000  
 Interference Contour - F(50,10): 158.7 dBu ERP (watts) at Azimuth: 99

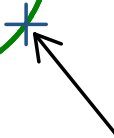
DEPRESSION ANGLE	RELATIVE FIELD	ERP (WATTS)	dBk	DISTANCE (m)		
				Contour	Horizontal	AGL
0	1.000	99.0	-10.04	0.8	0.8	183.0
5	0.996	98.2	-10.08	0.8	0.8	182.9
10	0.985	96.1	-10.17	0.8	0.8	182.9
15	0.967	92.6	-10.34	0.8	0.8	182.8
20	0.942	87.8	-10.56	0.8	0.7	182.7
25	0.910	82.0	-10.86	0.7	0.7	182.7
30	0.871	75.1	-11.24	0.7	0.6	182.6
35	0.826	67.5	-11.70	0.7	0.5	182.6
36	0.816	65.9	-11.81	0.7	0.5	182.6
37	0.806	64.3	-11.92	0.7	0.5	182.6
38	0.796	62.7	-12.03	0.6	0.5	182.6
39	0.785	61.0	-12.15	0.6	0.5	182.6
40	0.774	59.3	-12.27	0.6	0.5	182.6
45	0.717	50.9	-12.93	0.6	0.4	182.6
50	0.654	42.3	-13.73	0.5	0.3	182.6
55	0.586	34.0	-14.69	0.5	0.3	182.6
60	0.514	26.2	-15.82	0.4	0.2	182.6
65	0.437	18.9	-17.23	0.4	0.1	182.7
70	0.357	12.6	-18.99	0.3	0.1	182.7
75	0.273	7.4	-21.32	0.2	0.1	182.8
80	0.186	3.4	-24.65	0.2	0.0	182.9
85	0.096	0.9	-30.40	0.1	0.0	182.9
90	0.000	0.0	-150.04	0.0	0.0	183.0
WORST CASE HEIGHT AGL (m)						182.6



KFBW F(50,50) 118.7 dBu



K221BI (Proposed) Site



Protected Signal Levels at Proposed Tower Site

