

## **LPFM SECOND ADJACENT CHANNEL WAIVER STUDY**

Tulsa, OK  
Channel 219L1 (91.7 MHz)

The proposed location is second-adjacent channel short spaced to KTBT, Broken Arrow, Oklahoma.

The proposed site qualifies for a second adjacent waiver as specified in Section 73.807(e) of the Commission's Rules.

KTBT operates on Channel 221 with 27 kW effective radiated power ("ERP") at 200 meters height above average terrain ("HAAT") into a non-directional antenna located 6.1 km from the proposed LPFM site. KTBT places a 99.75 dBu service contour at the proposed LPFM site.

Using the U/D method<sup>1</sup>, the proposed LPFM station is predicted to produce an undesired interference overlap in respect to KTBT to the proposed LPFM station's 139.75 dBu interference contour ("overlap zone"). Using the free-space calculation method, at 3 watts ERP, the interfering contour extends 1.25 meters (0.001 kilometers) from the radiation center. The proposed site is on the roof of a large office building in Downtown Tulsa. The interference will not even reach the unoccupied roof-line of the building. Therefore, interference will not reach any occupied portion of this building or any adjacent buildings.

Based on the information presented, the Applicant hereby submits that the proposed station will not create any interference to existing or potential listeners of second adjacent channel station KTBT, Broken Arrow, Oklahoma

The applicant requests a waiver of §73.807 of the Commission's Rules in respect to KTBT, Broken Arrow.

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<sup>1</sup> - See *Living Way Ministries, Inc.* Memorandum Opinion and Order, 17 FCC Rcd 17054, 17056 (2002) at 5. *Recon denied* 23 FCC Rcd 15070 (2008).

FM Station Parameters

KTBT LIC 221 C2 Dom 27.000 kW 200 m HAAT MCN Non-DA  
Broken Arrow OK 425.0 m COR AMSL -  
Lat = 36 06 38.30, Lng = 96 01 57.90 - NAD 83  
Ihm Licenses, LLC  
Fac ID# 33727 BLH19901114KC  
Dist = 6.11 km, Azi = 220.1°, Rev Azi = 40.1°

Required Spacing: (FCC = 52.50 R, Margin = -46.39 M)

Toward Ref: HAAT = 219.2m, 27.0 kW

Toward Ref: 60 dBu Protected = 53.4 km, Int = 6.01 km

Direct line Ref. Protected Contour = 4.0 km, Int = 0.12 km

Direct line Ref. HAAT = 88.0 meters, 0.003 kW

•Signal at Ref. Site = 99.75 dBu. Dist. to Friends Int. contour = 1.25 m

(^ Without considering vertical elevation field.)

**PHOTO OF BUILDING OF PROPOSED SITE**



Yellow line does not represent the scale of the tower height. Since the interfering contour of the proposed station is less than 2 meters, the interference will not even leave the mounting pole.

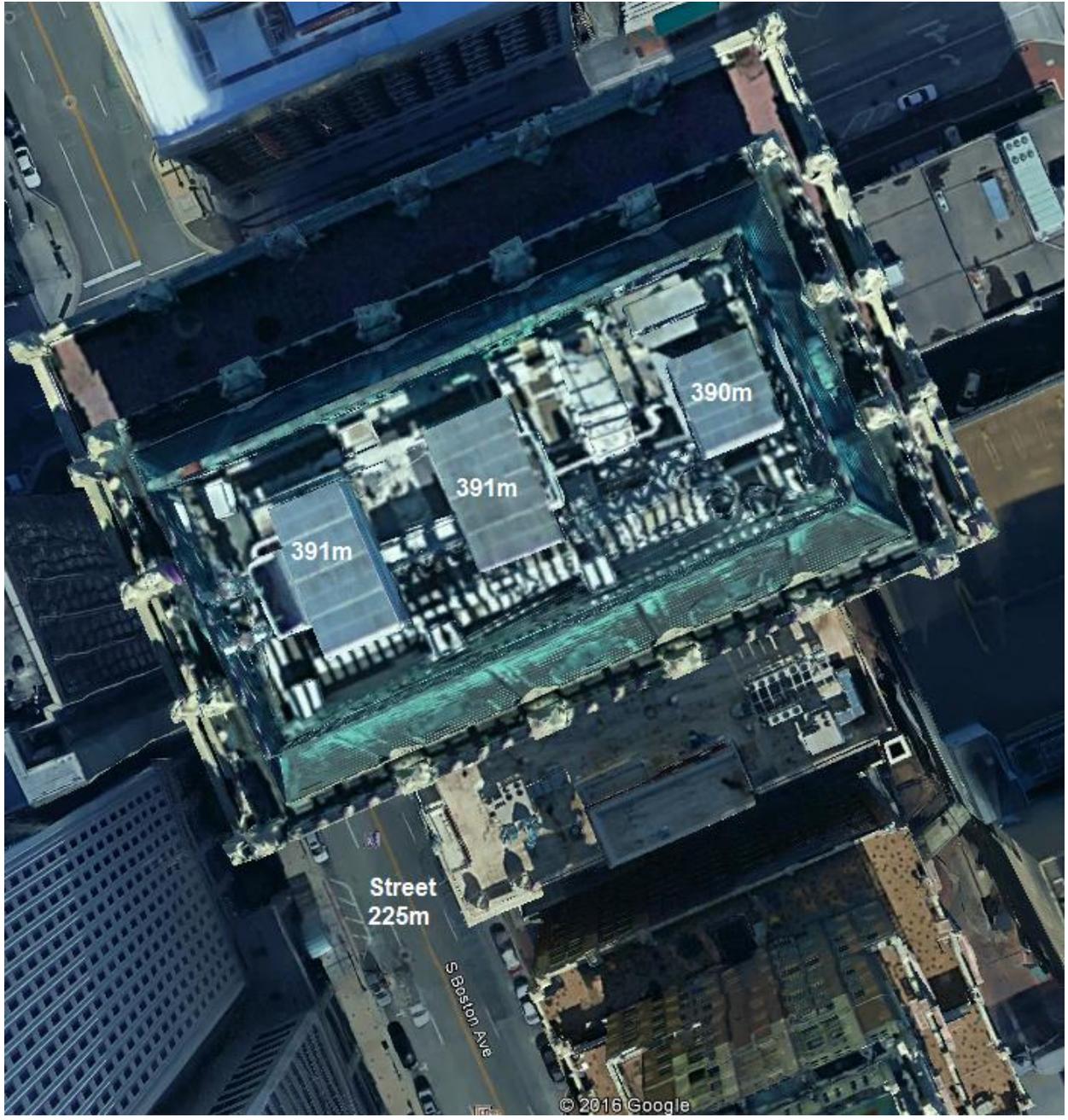
## **APPLICATION OF “20 FOOT RULE”**

§17.7(e)(3) of the Commission’s Rules states that notification to the Federal Aviation Administration (FAA) is not required for “any antenna structure of 6.1 meters (20 feet) or less in height, except one that would increase the height of an another antenna structure.

The proposed site is on the roof of a tall office structure in Downtown Tulsa, Oklahoma. As noted in the previous pictures, there is a façade roof which hides three cooling towers. The highest of those cooling towers extends 166 meters above ground level (391m AMSL). The overall height of the new tower structure is 172 meters above ground level with the radiation center at 170 meters AGL.

As the overall height of the new tower structure is less than 6.1 meters above the highest point of the building, the structure does not require registration per the 6.1 meter (20-foot) rule criteria.

<b>DETERMINATION Results</b>	
<b>Structure does not require registration. The structure meets the 6.10-meter (20-foot) Rule criteria.</b>	
<b>Your Specifications</b>	
<b>NAD83 Coordinates</b>	
Latitude	36-09-09.6 north
Longitude	095-59-20.0 west
<b>Measurements (Meters)</b>	
Overall Structure Height (AGL)	172
Support Structure Height (AGL)	166
Site Elevation (AMSL)	225
<b>Structure Type</b>	
BANT - Building with Antenna on top	



**ANTENNA DIAGRAM – COMPLIANCE WITH “20-FOOT” RULE  
AND DEMONSTRATION OF NON-INTERFERENCE TO KVOO-FM**

