

## **COMPREHENSIVE ENGINEERING EXHIBIT**

### **KALZ (FM) FOWLER, CALIFORNIA**

#### **TRANSMITTER LOCATION MINOR CHANGE**

This minor change application seeks only a change to directional antenna for the currently licensed facility of KALZ (FM). No changes in location, height, or power of the facility are to be made. This application seeks only to change the stations licensed antenna to directional from non-directional.

The station is now and will remain fully spaced in accordance with 73.207, please see attached spacing study for details.

Also attached are details of the desired antenna pattern.

The Proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation."

The antenna system is an EPA type 1, 6- bay, full wave spaced, Shively 6810, directional antenna, mounted with its center of radiation 81 meters above ground level, and operates with an effective radiated power of 25.0 Kilowatts in both the horizontal and vertical planes. At 2 meters above ground, at 14 meters from the base of the tower, this proposal will contribute worst case, 155.3 microwatts per square centimeter, or 15.5 percent of the allowable ANSI limit for controlled exposure, and 77.5 percent of the allowable limit for uncontrolled exposure.

The applicant has posted signage in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access by fencing and locked gates. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

# Spacing Study:

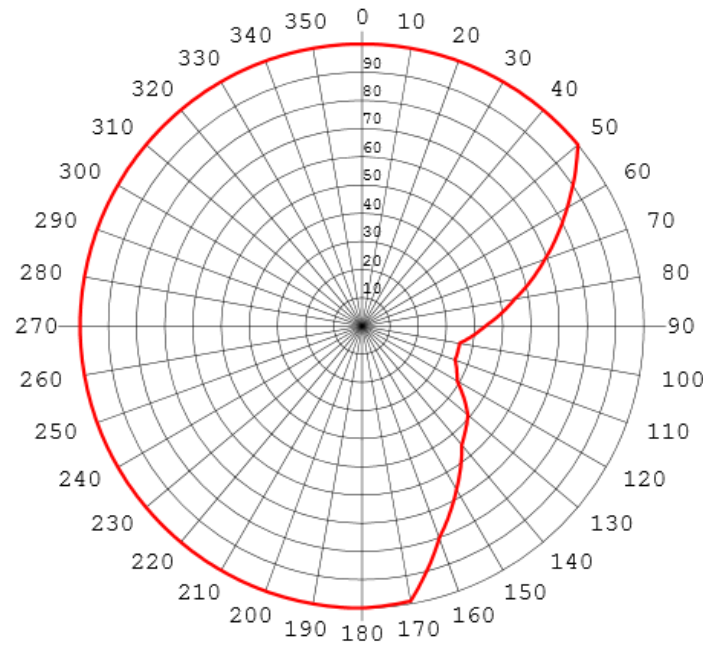
iHeartMedia  
Troy Langham  
KLAZ 73-207 Spacing Study  
Ihm Licenses, LLC

REFERENCE  
36 41 41.80 N.  
119 43 59.50 W.  
CLASS = B1  
Current Spacings to 3rd Adj.  
Channel 244 - 96.7 MHz

DISPLAY DATES  
DATA 03-25-24  
SEARCH 03-26-24

Call	Channel	Location	Azi	Dist	FCC	Margin
KALZ	LIC 244B1	Fowler	CA 0.0	0.00	174.5	-174.5
KSEQ	LIC 246B	Visalia	CA 95.1	70.94	70.5	0.44
K241CL	LIC 241D	Fresno	CA 295.4	11.96	10.5	1.5
KMRQ	LIC 244A	Riverbank	CA 316.4	152.17	142.5	9.7
KPSL-FM	LIC 243B	Bakersfield	CA 150.3	154.21	144.5	9.7
DKSLK	VAC 241A	Visalia	CA 135.6	62.53	47.5	15.0
KWAV	LIC 245B	Monterey	CA 264.5	169.87	144.5	25.4
KUBB	LIC 242B	Mariposa	CA 344.3	96.72	70.5	26.2
K244DV	LIC 244D	Merced	CA 322.5	102.73	74.5	28.2
NEW	CP 247A	Coalinga	CA 222.4	84.92	47.5	37.4
KEBT	LIC-N 245B1	Lost Hills	CA 179.4	151.70	113.5	38.2
KEBT	CP -N 245B1	Lost Hills	CA 179.3	152.10	113.5	38.6
DKQNO	VAC 247B1	Coalinga	CA 225.7	89.76	49.5	40.3
KOND	LIC 298B	Hanford	CA 95.0	70.87	16.5	54.4
K297BU	LIC 297D	Merced	CA 317.0	91.06	11.5	79.6
KSYV	LIC 244A	Solvang	CA 192.4	227.52	142.5	85.0
K243AK	LIC-D 243D	Mammoth Lakes	CA 39.8	147.83	61.5	86.3
KSLY	LIC 241B	San Luis Obispo	CA 209.5	169.87	70.5	99.4
K243BC	LIC 243D	Conway Summit	CA 17.4	162.67	61.5	101.2
K243CL	LIC 243D	San Luis Obispo	CA 209.5	169.80	61.5	108.3
KSEG	LIC 245B	Sacramento	CA 325.3	265.87	144.5	121.4
KOIT	LIC 243B	San Francisco	CA 296.9	268.51	144.5	124.0
KLJR-FM	LIC 244A	Santa Paula	CA 166.4	270.27	142.5	127.8
KLCA	LIC-N 243C1	Tahoe City	CA 357.4	290.60	160.5	130.1
KTSE-FM	LIC-Z 246A	Patterson	CA 305.5	180.48	47.5	133.0
KOIT-FM6	LIC-D 243D	San Francisco	CA 300.8	231.80	95.5	136.3
K246BO	LIC 246D	El Paso De Robles	CA 218.0	147.43	10.5	136.9
K241CI	LIC-D 241D	Bakersfield	CA 154.8	149.75	10.5	139.3
KRJK	LIC 247A	Lamont	CA 151.1	190.03	47.5	142.5
K298DG	CP -D 298D	Modesto	CA 311.5	154.30	11.5	142.8
KOIT-FM4	LIC-D 243D	San Francisco	CA 301.7	256.96	113.5	143.5
KSQQ	LIC 241A	Morgan Hill	CA 287.1	192.24	47.5	144.7
K243CH	LIC 243D	Jackson	CA 337.1	206.34	61.5	144.8
KOIT-FM5	LIC-D 243D	San Francisco	CA 301.9	241.18	95.5	145.7
K242AT	LIC-D 242D	Salinas, Etc.	CA 273.0	158.22	10.5	147.7
K298DH	LIC-D 298D	Bakersfield	CA 155.5	163.93	11.5	152.4
KOIT-FM8	LIC-D 243D	San Francisco	CA 307.2	248.12	95.5	152.6
KMLM-FM	LIC 297B	Grover Beach	CA 209.5	169.85	16.5	153.4
K244AM	LIC-D 244D	China Lake, Etc.	CA 125.7	228.56	74.5	154.1
K247BL	LIC 247D	Tularcitos & Carmel	CA 264.6	170.26	10.5	159.8
KPIG-FM	LIC 298A	Freedom	CA 275.6	176.93	11.5	165.4
KRTO	LIC-N 246A	Guadalupe	CA 201.4	213.94	47.5	166.4
KLLC-FM2	LIC-D 247D	Pleasanton	CA 300.6	215.46	47.5	168.0

Antenna Pattern:



Azi	Rel	dBk	kW	dB	Azi	Rel	dBk	kW	dB
0	1.000	13.98	25.0	0.00	180	1.000	13.98	25.0	0.00
10	1.000	13.98	25.0	0.00	190	1.000	13.98	25.0	0.00
20	1.000	13.98	25.0	0.00	200	1.000	13.98	25.0	0.00
30	1.000	13.98	25.0	0.00	210	1.000	13.98	25.0	0.00
40	1.000	13.98	25.0	0.00	220	1.000	13.98	25.0	0.00
50	1.000	13.98	25.0	0.00	230	1.000	13.98	25.0	0.00
60	0.840	12.46	17.6	-1.51	240	1.000	13.98	25.0	0.00
70	0.690	10.76	11.9	-3.22	250	1.000	13.98	25.0	0.00
80	0.550	8.79	7.6	-5.19	260	1.000	13.98	25.0	0.00
90	0.438	6.80	4.8	-7.18	270	1.000	13.98	25.0	0.00
100	0.352	4.90	3.1	-9.08	280	1.000	13.98	25.0	0.00
110	0.352	4.90	3.1	-9.08	290	1.000	13.98	25.0	0.00
120	0.390	5.80	3.8	-8.18	300	1.000	13.98	25.0	0.00
130	0.490	7.78	6.0	-6.20	310	1.000	13.98	25.0	0.00
140	0.550	8.79	7.6	-5.19	320	1.000	13.98	25.0	0.00
150	0.670	10.50	11.2	-3.48	330	1.000	13.98	25.0	0.00
160	0.800	12.04	16.0	-1.94	340	1.000	13.98	25.0	0.00
170	0.990	13.89	24.5	-0.09	350	1.000	13.98	25.0	0.00

Rotation Angle = 0