

**Broadcast Engineering Services of Bonny Doon, Inc.**

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**Engineering Statement  
Minor Change  
To  
KANO Hilo, Hawaii  
BLED-20080501ACI**

The licensee proposes to modify KANO by changing the operating frequency from Channel 216 (91.1 MHz) to Channel 206 (89.1 MHz). The city of license, antenna location, effective radiated power, height above sea level, height above average terrain, and height above ground of the existing and proposed antenna system would be unchanged. There would be no change to the existing coverage area.

A comprehensive frequency search reveals no overlaps to any existing or proposed full power facilities in the state of Hawaii will be caused by this proposed frequency change.

The existing and proposed transmitting antenna is a circularly polarized, full-wave spaced Shively 6810-4. The worst case calculated RFR level is  $96.7 \text{ mW/cm}^2$  at 17.4 meters from the support structure, which is well below the occupied standard, and the same as currently exists at the site. There are no other broadcast facilities at this tower.

Because the calculated RFR level is below the public standard of  $200 \text{ mW/cm}^2$ , and well below the occupied standard of  $1000 \text{ mW/cm}^2$ , the existing and proposed operation appears to be compliant with FCC and ANSI limits. The site is located behind locked gates, access is limited to service personnel, and the tower and the overall site have RFR caution and warning signage posted throughout.

The applicant will, in coordination with other users of the site, reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from Radiofrequency Electromagnetic fields in excess of FCC guidelines.

Respectfully submitted,



Donald E. Mussell Jr. NCE-CBT  
Consulting Engineer  
March 22, 2014

Broadcast Engineering Services of Bonny Doon, Inc.  
Don Mussell NCE-CBT

KANO Frequency Modification

Hawaii Public Radio, Inc.

REFERENCE CH# 206C2 - 89.1 MHz, Pwr= 30 kw, HAAT= 0.0 M, COR= 536 M  
19 35 31.4 N.  
155 07 36.0 W.  
Average Protected F(50-50)= 23.64 km  
omni-directional

DISPLAY DATES  
DATA 03-21-14  
SEARCH 03-21-14

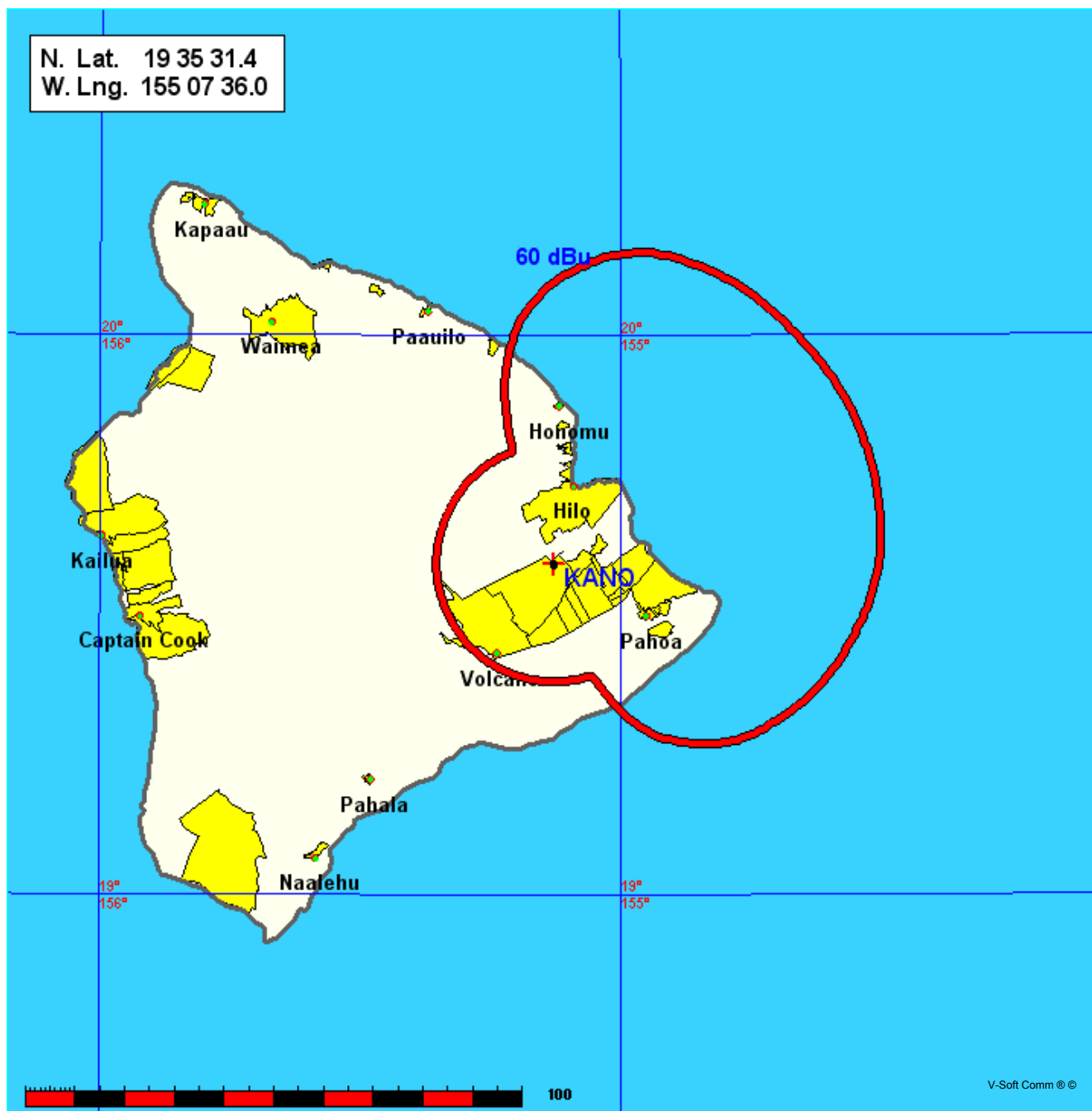
CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
207D Hilo	K207CD	LIC _C_	HI	34.2 214.2	18.79 BLFT20060313ADJ	19 43 56.0 155 01 32.0	0.250 -35	10.1 38	7.1 Educational Media Foundati	-57.8*	-85.8
206D Kailua Kona	K206EJ	LIC _V_	HI	279.9 99.6	84.52 BLFT20120131AIO	19 43 15.0 155 55 16.0	0.010 867	43.1 1659	3.2 Calvary Chapel of Twin Fal	35.3	-29.7

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference zone= - Zone 2, Co to 3rd adjacent.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
"\*"affixed to 'IN' or 'OUT' values = site inside protected contour.

KANO Frequency Modification  
Hawaii Public Radio, Inc.

Coverage Study - FCC NGDC 30 Sec  
03-21-2014

KANO CH206 C2, 30.0 kW, 0.0M HAAT, 536.0M COR AMSL  
Service Contour = 60 dBu. Population = 79,145



State of Hawaii )  
Kilauea )  
County of Kauai )

That he declares, under penalty of perjury, that the foregoing engineering exhibits were prepared by him or under his direction and supervision; and that the statements contained therein are true and correct to the best of his belief and knowledge.

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March 22, 2014