

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

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**Engineering Statement in support of an application  
for a New LPFM Broadcast station  
Lihue, Hawaii**

Calvary Chapel Lihue, Inc. (CCL) is requesting a construction permit for a new LPFM broadcast station to be located in Lihue, Hawaii on Ch 235. The antenna site specified is located above nearby Hanamaulu town, and will cover an estimated 13,000 persons.

An allocation study for Ch. 235 (94.9 MHz) was performed to verify clearances to other authorized facilities surrounding the proposed site. The use of Ch 235 is fully spaced to other existing and proposed broadcast services, and causes no overlap with any other existing or proposed facility.

A detailed allocation study with map exhibits is attached to this engineering statement.

The proposed antenna system is a 1-bay antenna, circularly polarized, and producing 8 watts (.1 KW) ERP. This antenna and power combination, pole-mounted at 10 meters above ground, will produce a calculated worst-case RFR energy field of 1.7 microwatts per squared centimeter at a distance of 8.5 meters from the base of the tower support structure. This is less than 1% of the public limit, and is therefore compliant with the FCC rules concerning RFR both on and adjacent to the proposed tower location. There are no other broadcast emitters within 200 feet of this site.

Based upon these calculations and studies, the applicant is ready to build this LPFM facility as soon as a construction permit is issued, and will make all efforts to expedite the beginning of broadcast as soon as possible.

Respectfully submitted,



Donald E. Mussell Jr. NCE-CBT  
Consulting Engineer  
November 8, 2013

Broadcast Engineering Services of Bonny Doon, Inc.  
Don Mussell NCE-CBT  
NEW LPFM  
Lihue, Hawaii

REFERENCE  
22 00 17.3 N. CLASS = L1 DISPLAY DATES  
159 21 38.1 W. Current Spacings to 2nd Adj. DATA 11-01-13  
----- Channel 235 - 94.9 MHz ----- SEARCH 11-03-13

Call	Channel	Location	Azi	Dist	FCC	Margin
K233AK	LIC-D 233D	Hanalei	HI 329.8	28.29	8.0	20.3
Translator for KQNG, Lihue, HI.						

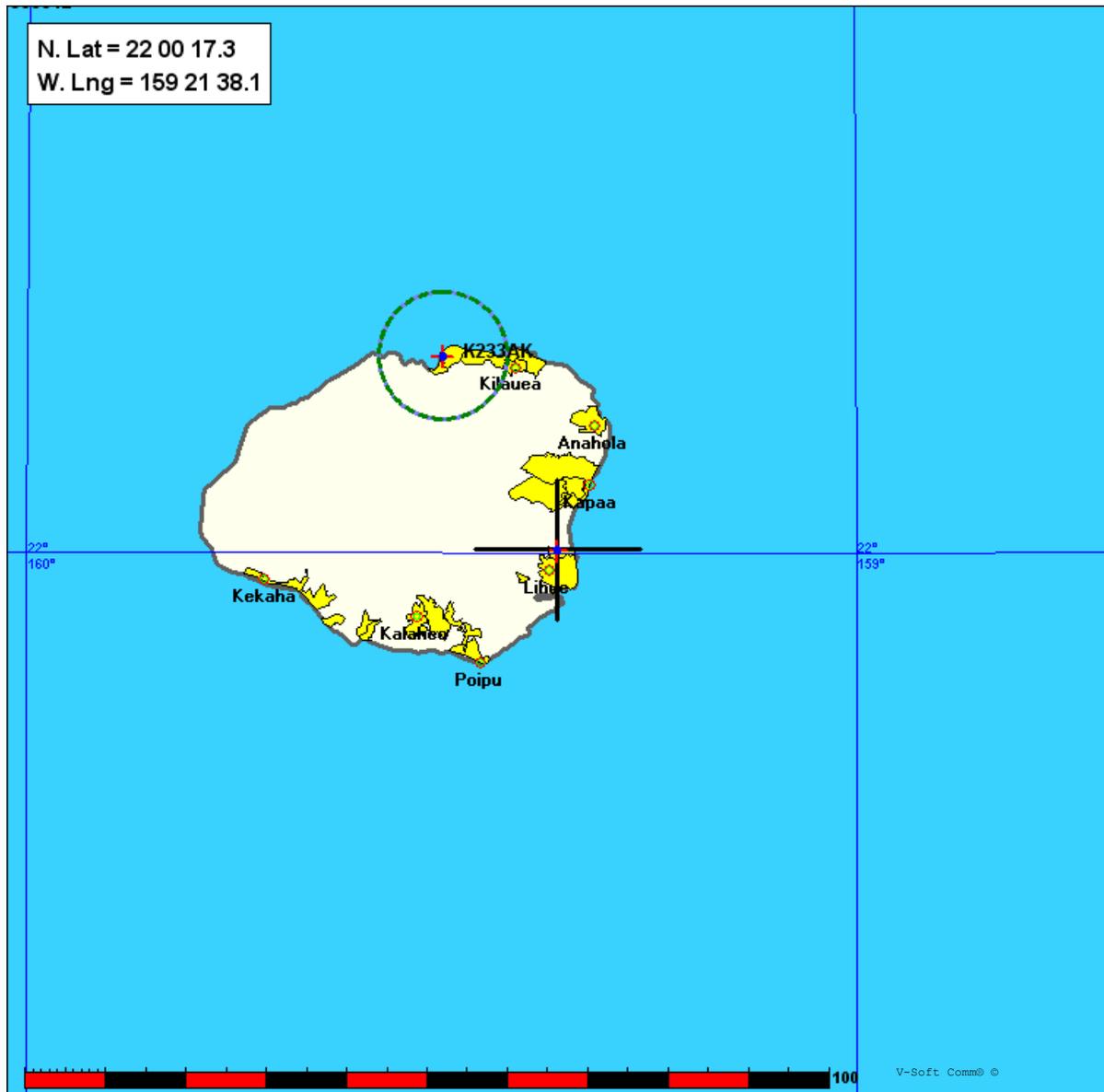
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CH 235 L1 94.9 MHz

Current Spacings to 2nd Adj.

NEW LPFM

Lihue, Hawaii



Data Date:11-01-13 Job Date:11-03-13

Call	CH#	Type	Location	Azi	D-KM	FCC	Margin
K233AK	233D	LIC-D	Hanalei	HI	329.8	28.29	8.0 20.3

NEW LPFM  
Lihue, Hawaii

Coverage Study - FCC NGDC 30 Sec  
11-03-2013

New CH235 L1, 0.008 kW, 101.4M HAAT, 208.0M COR AMSL  
Service Contour = 60 dBu. Population = 13,280

