

ENGINEERING STATEMENT

This engineering data contained herein have been prepared on behalf of NEW DYNASTY CULTURE CENTER, permittee of KQHU-LP, Channel 250L1 in Honolulu, Hawaii, in support of this application for modification of Construction Permit BNPL-20131114BRW, to specify operation on Channel 251L1 and a change in transmitter site. The new site is located only 400 meters from that authorized to KQHU-LP.

Due to the recent grant of a new full-power authorization on Channel 250C2 in Kualapuu, Hawaii, (BNPH-20151013ADQ), the present site of KQHU-LP (as well as the newly proposed site) is short-spaced to this co-channel station. As a result, a change to first-adjacent-channel 251L1 is now requested for KQHU-LP. It is now proposed to locate a 1-bay circularly polarized antenna at the 10.7-meter level of the existing KITV-DT tower atop the Ala Moana Hotel in Honolulu. Exhibit B is a map upon which the newly proposed 60 dBu service contour of KQHU-LP is plotted.

The permittee requests a waiver of the Commission's 2<sup>nd</sup>-adjacent-channel spacing Rules with regard to full-power station KDNN(FM), Channel 253C1 in Honolulu, Hawaii. A justification for the waiver request appears in Exhibit C. A revised power density calculation is provided in Exhibit D.

Since no change in the overall height or location of the KITV-DT tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission has assigned Antenna Structure Registration Number 1019034 to this tower.

EXHIBIT A

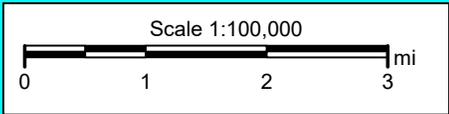
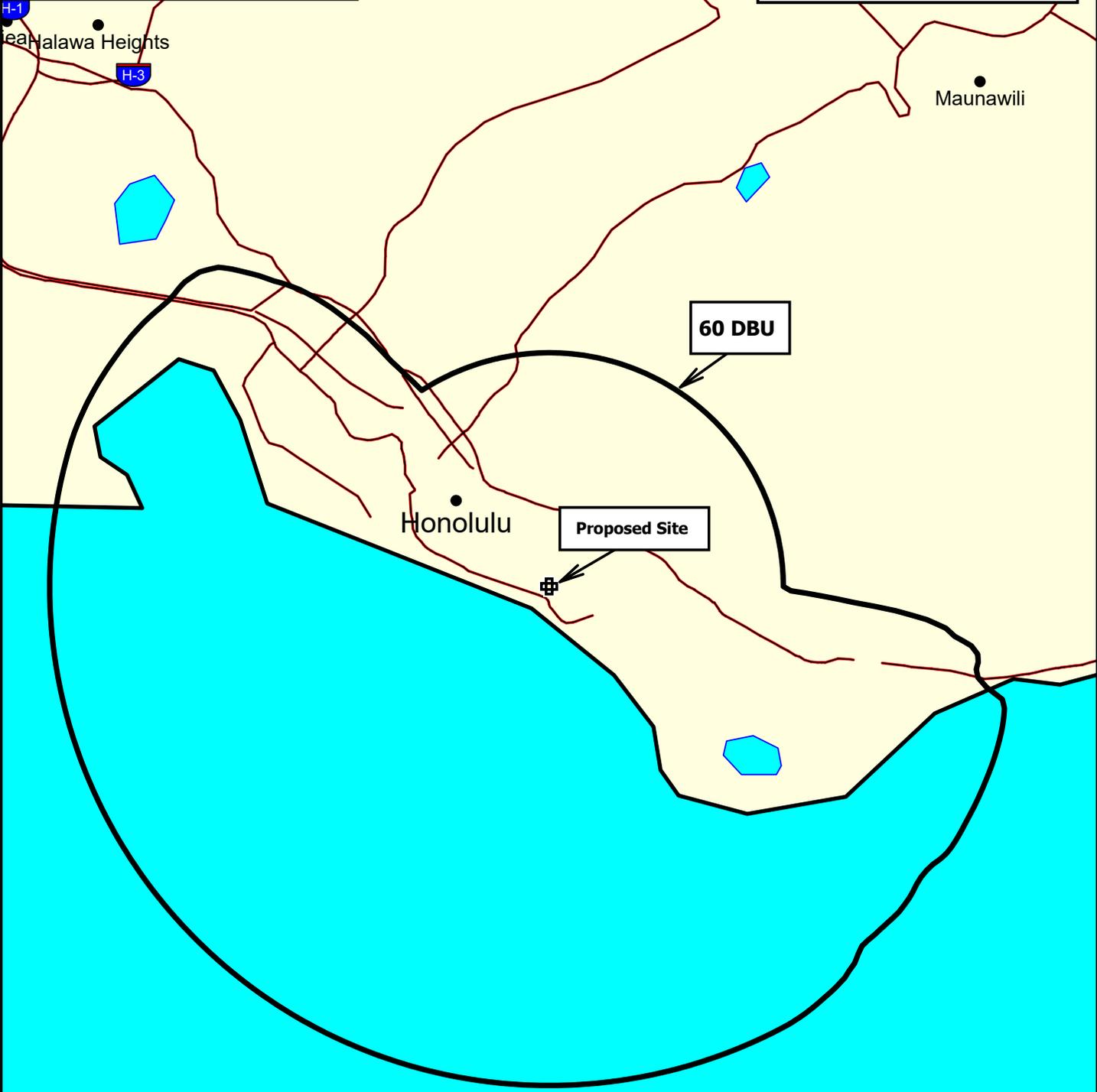
I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K", a smaller "T", and a long horizontal stroke for the "Fisher" part.

KEVIN T. FISHER

February 9, 2017

**CONTOUR POPULATION  
2015 U.S. CENSUS DATA  
224,234 (108,091 HH)**



**EXHIBIT B  
PREDICTED SERVICE CONTOUR  
PROPOSED KQHU-LP  
CHANNEL 251L1 - HONOLULU, HAWAII**

SECOND-ADJACENT-CHANNEL WAIVER REQUEST  
PROPOSED KQHU-LP  
CHANNEL 251L1 – HONOLULU, HAWAII  
[MODIFICATION OF BNPL-20131114BRW]

The newly proposed site is located 3.0 kilometers from that of KDNN(FM), Channel 253C1 in Honolulu, Hawaii. Since the required spacing to this station is 73 kilometers, a waiver of the Commission's spacing rules with regard to this station is requested and believed to be justified for the reasons stated below.

Attached as Exhibit C-2 is a map upon which the proposed site is plotted. To that map, we have added the KDNN(FM) 109.5 dBu service contour, which passes very close to the proposed site. Based on the FCC's 40 dB desired-to-undesired ratio that applies to second-adjacent-channel situations such as this, the proposed interference contour to KDNN(FM) is the LPFM station's proposed 149.5 dBu contour. If one assumes a maximum effective radiated power of 100 watts in all depression angles for the LPFM antenna, the interference contour toward KDNN(FM) would extend only 2 meters from the proposed antenna. Since the antenna will be mounted 10.7 meters above the level of the hotel roof, and 132.6 meters above street level, it is clear that no interference to the reception of KDNN(FM) could occur.

As a result, a waiver of the FCC's 2<sup>nd</sup>-adjacent-channel spacing Rule with regard to KDNN(FM) is respectfully requested and believed to be justified.



**KDNN(FM)  
109.5 DBU  
CONTOUR**

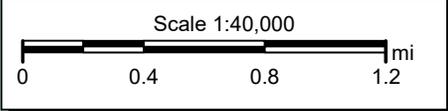


**KDNN**



Honolulu

**Proposed Site**



**EXHIBIT C-2  
2ND-ADJACENT CHANNEL WAIVER REQUEST  
PROPOSED KQHU-LP  
CH. 251L1 - HONOLULU, HAWAII**

POWER DENSITY CALCULATION  
PROPOSED KQHU-LP  
CHANNEL 251L1 – HONOLULU, HAWAII  
[MODIFICATION OF BNPL-20131114BRW]

Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 100 watts (horizontal and vertical), an antenna radiation center located 10.7 meters above roof level, and assuming a vertical relative field value of 40 percent at the steeper elevation angles for the proposed antenna, maximum power density two meters above ground of  $0.014 \text{ mW/cm}^2$  is calculated to near the base of the tower. Since this value is only 1.4 percent of the  $1.0 \text{ mW/cm}^2$  reference for controlled environments (areas without public access) surrounding a facility operating in the FM band, and since the roof atop which the KITV-DT antenna is located is secure from unauthorized access and an RF safety protocol has been developed for this site, a grant of this proposal may be considered a minor environmental action with respect to exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating on the roof and in the vicinity of the antenna are not exposed to excessive non-ionizing electromagnetic radiation.