

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of NEW DYNASTY CULTURE CENTER in support of its Application for Construction Permit to operate a Low Power FM station on Channel 250 (97.9 MHz) in Honolulu, Hawaii.

It is proposed to mount a standard two-bay circularly polarized antenna at the 78-meter level of an existing building. The proposed effective radiated power is 100 watts. Exhibit B is a map upon which the proposed 60 dBu service contour for the proposed facility is plotted. It is important to note that the proposed location meets all of the Commission's spacing requirements to pertinent co-channel and adjacent-channel full-power, FM translator and LPFM stations, except in one instance. The proposed site is short-spaced to second-adjacent-channel station KHCM(FM) in Honolulu, Hawaii. As a result, we request a waiver of the Commission's Rules with respect to KHCM(FM) and the justification appears in Exhibit C. We have also determined that the proposed facility should not cause objectionable interference to the input signal of any existing translator station, based on the information contained in the FCC's CDBS database.

Employing the methods of OET Bulletin No. 65, and based on the elevation pattern of a standard 2-bay FM antenna, maximum power density two meters above ground of  $0.00026 \text{ mW/cm}^2$  is calculated to occur 35 meters from the base of the tower. Since this is only 0.1 percent of the  $0.2 \text{ mW/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating in the FM band, a grant of this proposal can be considered a minor environmental action with respect to human exposure to non-ionizing electromagnetic

EXHIBIT A

radiation. Further the station owner will take whatever precautionary steps are necessary to ensure that workers operating in the vicinity of the antenna are not exposed to RF energy in excess of the Commission's guideline values.

Due to the diminutive height of the existing building and its proximity to the nearest airport runways, the FAA has not been notified of this application. In addition, FCC registration of this structure is not required for the same reasons. This conclusion is supported by the Commission's TOWAIR program.

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



KYLE T. FISHER

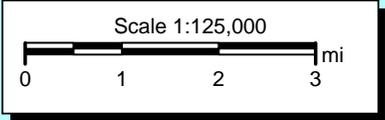
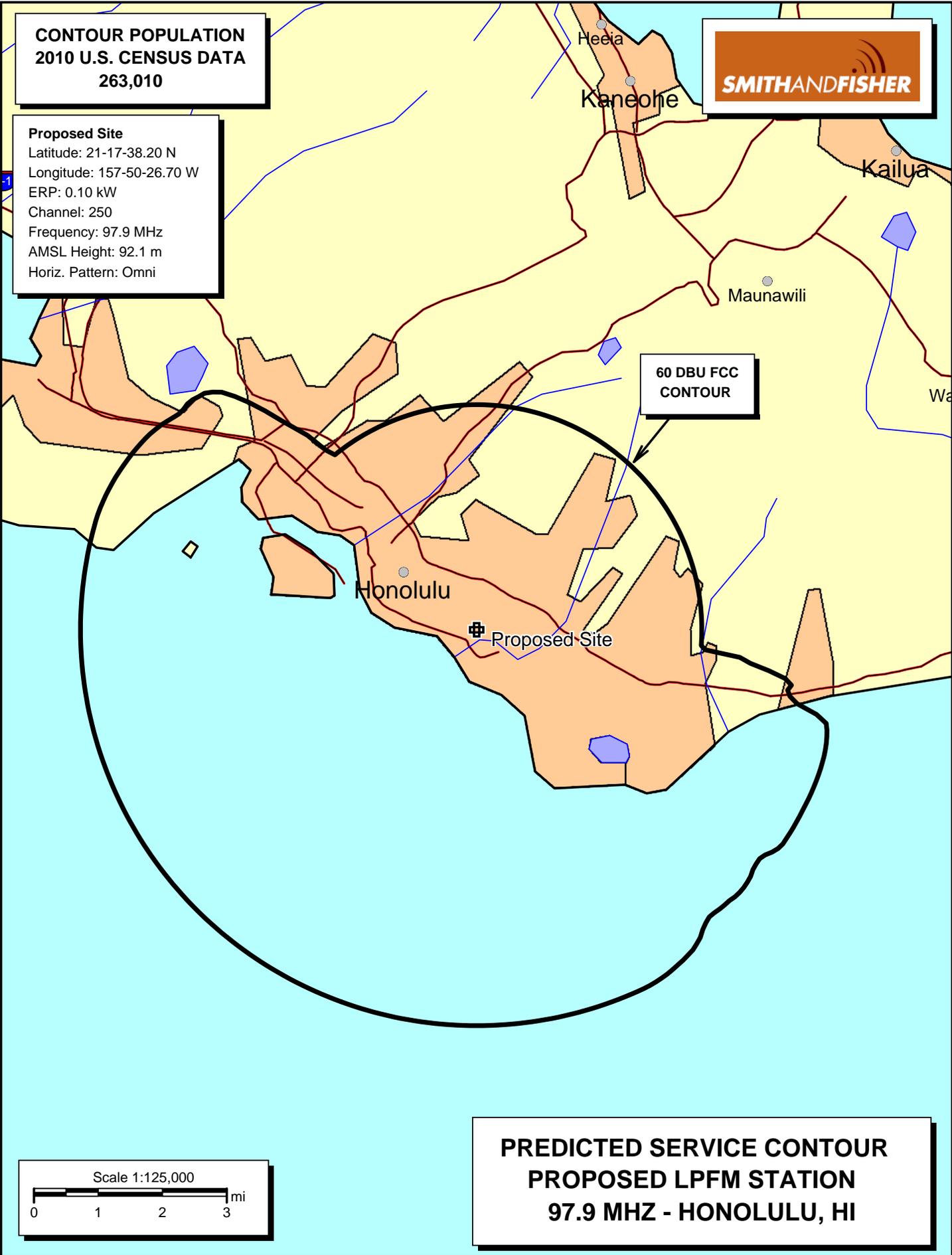
November 14, 2013

**CONTOUR POPULATION  
2010 U.S. CENSUS DATA  
263,010**



**Proposed Site**  
Latitude: 21-17-38.20 N  
Longitude: 157-50-26.70 W  
ERP: 0.10 kW  
Channel: 250  
Frequency: 97.9 MHz  
AMSL Height: 92.1 m  
Horiz. Pattern: Omni

**60 DBU FCC  
CONTOUR**



**PREDICTED SERVICE CONTOUR  
PROPOSED LPFM STATION  
97.9 MHZ - HONOLULU, HI**

REQUEST FOR WAIVER OF SECOND-ADJACENT-CHANNEL SPACING RULE  
PROPOSED LPFM STATION  
CHANNEL 250 – HONOLULU, HAWAII

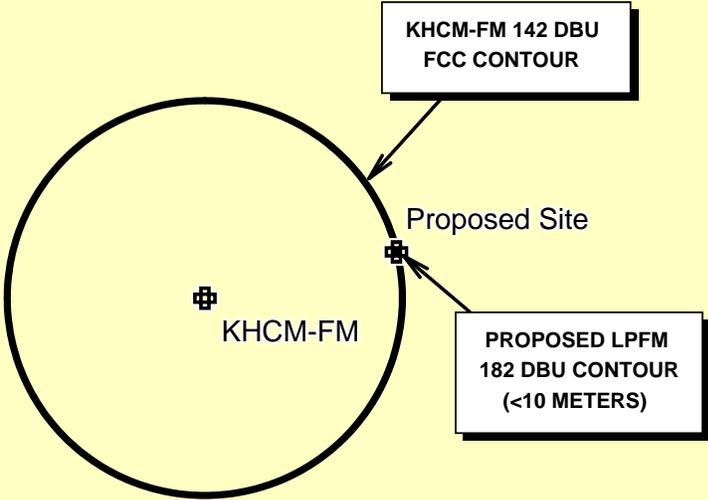
The site proposed herein is located 0.2 kilometers from that KHCM-FM, which operates on Channel 248C1 in Honolulu. Since the required spacing is 73 kilometers, a waiver of the Commission's spacing rules with regard to this station is requested and believed to be justified for the reasons stated below.

Attached, as Exhibit C-2, is a map on which the proposed LPFM site is plotted in relation to the KHCM-FM 142 dBu contour, which passes close to the LPFM site. With a 40 dB desired-to-undesired ratio for second-adjacent-channel stations applied in this instance, we have also plotted the proposed LPFM proposal's 182 dBu interference contour. This contour extends less than 10 meters from the proposed LPFM antenna. Since the LPFM antenna will be mounted at least 77 meters above ground level, the proposed interference contour will exist well above ground and will therefore have no adverse effect on reception of KHCM-FM.

We have also conducted a Longley-Rice-based interference analysis for the KHCM-FM situation, the results of which are attached as Exhibit C-3. The study was run with a cell size of 1.0 kilometer and an increment spacing of 0.1 kilometer. It calculates predicted interference (based on the 40 dB d/u ratio for second-adjacent-channel situations such as this) from the proposed LPFM station in locations where there is a signal of at least 60 dBu available for KHCM-FM.

The study concludes that there is no population within the protected contour of KMJQ that would be adversely affected by the operation of the proposed LPFM station. Accordingly, a waiver of the Commission's Rules with regard to KMJQ is requested and believed to be justified.

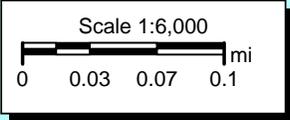
NOTE : PROPOSED LPFM INTERFERENCE CONTOUR EXTENDS LESS THAN 10 METERS FROM ANTENNA. SINCE ANTENNA WILL BE MOUNTED 77 METERS ABOVE GROUND, NO ADVERSE EFFECT TO THE RECEPTION OF KHCM-FM IS EXPECTED FROM PROPOSED FACILITY.



KHCM-FM 142 DBU  
FCC CONTOUR

Proposed Site

PROPOSED LPFM  
182 DBU CONTOUR  
(<10 METERS)



**EXHIBIT C-2  
WAIVER REQUEST FOR KHCM-FM  
PROPOSED LPFM STATION  
97.9 MHZ - HONOLULU, HI**

*Smith and Fisher Population Report**KHCM-FM (248) Honolulu, HI - BMLH20050719AHM**Lat: 21-17-37 N Lng: 157-50-32 W ERP: 80.0 kW AMSL: 141.0 m**FM Interference Study**Protected: FCC F(50-50): 60 dBu**Interference considered within 100 km.**Signal Resolution: 1.0 km**Study Date: 11/14/2013**FM Database Date: 10/25/2013**D/U Ratios Used:**Co: 20.0 dB**First Adj: 6.0 dB**Second Adj: -40.0 dB**Third Adj: -40.0 dB**Threshold for reception: 60.0 dBu.**Primary Terrain: V-Soft 3 Second US Terrain**Secondary Terrain: V-Soft 3 Second Alaska Terrain**Population Database: 2010 US Census (PL)**Percentages calculated using a baseline population of 808,088.**Stations considered which do not cause interference:**Proposed Honolulu LPFM (250)**Totals for KHCM-FM (248)**Calculation Area Population: 932,303 ( 6904.4 sq. km )**Not Affected by Terrain Loss: 808,088 ( 6321.5 sq. km )**Interfered Population: 0 ( 382.6 sq. km )**Interference Free: 808,088 ( 5938.9 sq. km )**Percent Interference: 0.00**Terrain Blocked Population: 124,215 ( 582.9 sq. km )*