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ENGINEERING REPORT

K247BX, Grass Valley, CA, Channel 247D FM Translator Application

ENGINEERING STATEMENT

All required protections are met by contour non-overlap pursuant to Section 74.1204, with the exception of protection to KHHZ, Gridley, CA 249B1 and KSEG, Sacramento, CA 245B. KHHZ and KSEG are protected, as discussed below.

PROTECTION TO KHHZ AND KSEG

KSEG 245B (63 kilometers at 211 degrees True from the proposed FM translator site) and KHHZ 249B1 (45 kilometers at 336 degrees True from the proposed FM translator site) are second adjacent-channel stations to the proposed channel 247D facility. The F50,50 service contours of KSEG and KHHZ extend beyond the proposed 247D transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to KSEG and KHHZ.

Note that a rule waiver of Section 74.1204 for this second/third adjacent-channel protection using the well-established *Living Way Ministries* Methodology is respectfully requested if such a rule waiver is deemed necessary for protection to any station.

The F50,50 signal strength from KSEG at the proposed 247D transmitter site is greater than 54 dBu (the “desired” signal of KSEG). The F50,50 signal strength from KHHZ at the proposed 247D transmitter site is greater than 57 dBu (the “desired” signal of KHHZ). The second/third adjacent-channel protection of Section 74.1204 is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to KSEG and KHHZ from the proposed 247D facility is a signal of greater than or equal to 94 dBu.

The 94 dBu signal based on a free space field determination is predicted to extend out to 445 meters from the proposed transmit antenna. As demonstrated by the attached aerial photograph of the proposed site, there is no population or major roads located within 445 meters of the proposed tower site. (All buildings are communication support shelters.) Therefore, KSEG and KHHZ are adequately protected by the proposed facility.



Google Earth

feet 2000
meters 800

