

DELAWDER COMMUNICATIONS, INC.

P.O. Box 1095
Ashburn, Virginia 20146-1095
(703) 299-9222

ENGINEERING REPORT

San Francisco, CA, Channel 229D 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 KRZZ, San Francisco, CA 227B and KPFA, Berkeley, CA 231B. KPFA and KRZZ are protected, as discussed below.

It is noted that the antenna rotation counterclockwise by ten degrees effectively reduces the F50,10 signal by 6 dB to the town of Hayward—an area where KXZM, Felton, CA 229B1 had previously submitted interference complaints. With the antenna rotation, the U/D ratio in the Hayward area is reduced to below minus 20 dB. (It is noted that Hayward (N 37-40-08; W 122-04-40) is at approximately to 53 dBu F50,50 contour of KXZM (beyond the protected 57 dBu contour).

Based on the new FM translator interference rules (from R&O of MB Docket No. 18-119), KXZM is fully protected based on any qualifying complaints of these new rules and policies.

PROTECTION TO KPFA AND KRZZ

KPFA 231B (23.8 kilometers at 59 degrees True from translator site) and KRZZ 227B (7.7 kilometers at 169 degrees True from translator site) are second adjacent-channel stations to the proposed channel 229 translator facility. The 54 dBu F50,50 service contour of both KPFA and KRZZ extend well beyond the 229D transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to KPFA or KRZZ.

Note that a rule waiver of Section 74.1204 for this second and 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 KPFA at the proposed 229D transmitter site is greater than 88 dBu (the “desired” signal of KPFA). The F50,50 signal strength from KRZZ at the proposed 229D transmitter site is greater than 90 dBu (the “desired” signal of KRZZ). The second/third adjacent-channel protection is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to KPFA or

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KRZZ is a 229D signal of greater than or equal to 128 dBu.

The 128 dBu signal based on a free space field determination is predicted to extend out to 28 meters from the proposed 229D transmit antenna. The interfering signal level will not reach any point at ground level or at 2 meters above ground level. (The clearance is at least 80 meters.) Therefore, pursuant to Section 74.1204(d) of the FCC Rules, KPFA and KRZZ are adequately protected by the proposed facility.