

EXHIBIT 13

Interference Considerations

Introduction

This application for modification of construction permit File Number BMPFT-20170207ABP for FM Translator K268DD, Los Angeles, California, requests a change in the location of the transmitting facilities for the translator, a change in effective radiated power, and a different orientation of the directional antenna array. The translator will provide fill-in service for AM station KTYM, Inglewood, California.

The geographical coordinates (NAD27) of the proposed FM translator site are as follows:

North latitude 34° 00' 25"
West longitude 118° 21' 55".

At this location the ground elevation is 136 meters above mean sea level.

The proposed operation of K268DD conforms with the requirements of Section 74.1204 of the Commission's Rules for a Class D station on Channel 268 with respect to overlap of predicted contours with the licensed operation of any FM station, LPFM station or FM translator, and the operation of any such facilities specified in a construction permit or pending application, on the same channel, the first adjacent channels, and the third adjacent channels, as shown in this Exhibit. On each of the second adjacent channels the proposed translator site is located within the predicted protected contour of an existing FM station. This Exhibit demonstrates that, under Section 74.1204(d) of the Rules, no objectionable interference will be caused to either of these FM stations. The proposed operation of the translator therefore would not result in objectionable interference to any station.

Description of Directional Antenna System

The basic composite directional antenna system for the proposed operation of K268DD is comprised of two vertically polarized Kathrein Model CL-FM/V Antennas spaced apart horizontally by 0.67 wavelength, with both of the log periodic antennas oriented to zero degrees True. The antennas are driven in phase, with equal power division. For the proposed operation of the translator, the basic antenna array is oriented clockwise by 181 degrees, so that maximum radiation is in the direction 181 degrees True. The antenna system will be side-mounted on a wooden pole with the radiation center located 12 meters above ground.

EXHIBIT 13 (continued)

Interference Considerations

The values of relative radiation for the horizontal plane radiation pattern for the composite antenna array are tabulated in Item 10 of the Tech Box in Section III-A of FCC Form 349 for this application. This data was provided by the antenna manufacturer, Kathrein USA.

The wooden supporting pole and the proposed antenna array will be located a short distance from the antenna towers of the directional antenna system for KTYM(AM), Inglewood, California, operating on 1460 kHz.

The proposed antenna array, associated coaxial cable transmission line, and lightning protection device mounted on the wooden supporting pole would be equivalent to a grounded, vertical conductor 13 meters in overall height above ground. At 1460 kHz, this structure would have an electrical height of 0.063 wavelength, or 22.8 electrical degrees. This is well below the threshold height of 36 electrical degrees specified in Section 1.30002(b) of the Commission's Rules, above which further review and analysis would be required with respect to KTYM(AM) (and the other nearby AM radio stations).

A moment-method study was carried out for this application to evaluate the changes in the KTYM(AM) theoretical daytime and nighttime directional antenna radiation patterns resulting from addition of the translator antenna array, transmission line, and lightning protection device as a parasitic radiating element. The study confirmed there would be no significant effects on the operation of KTYM(AM) from construction of the proposed FM translator facilities.

As this application does not propose any new construction involving either of the KTYM(AM) antenna towers, a partial directional antenna proof-of-performance therefore would not be required for KTYM(AM) (or for nearby stations KABC(AM), Los Angeles, on 790 kHz; KWKW(AM), Los Angeles, on 1330 kHz; and KFOX(AM), Torrance, on 1650 kHz, all in California).

Allocation Study

The FM stations and LPFM stations taken into account in the allocation study for this application are listed in Table A of this Exhibit.

Figure 1A of this Exhibit shows the pertinent predicted contours for the proposed operation of K268DD and co-channel LPFM stations KFQM-LP, Los Angeles; KZKA-LP, Los Angeles; KHBG-LP, Pasadena; and File Number BMPL-20170317AAZ, El Monte, all in California.

EXHIBIT 13 (continued)

Interference Considerations

Figure 1B of this Exhibit shows the pertinent predicted contours for the proposed operation of K268DD and co-channel LPFM stations File Number BNPL-20131114BLZ, Panorama City; File Number BNPL-20131114AYY, Pasadena; File Number BNPL-20131114AWZ, Los Angeles; and File Number BNPL-20131114BGY, Long Beach, all in California.

The nearest FM stations, LPFM stations and FM translators on the first adjacent channels and also on the third adjacent channels are at all sufficient distances from the proposed K268DD site so as not to require further studies with respect to overlap of contours with the proposed operation of K268DD.

Figure 2 of this Exhibit depicts the location of the proposed K268DD site with respect to the predicted protected contours for the nearby FM stations on the second adjacent channels. As shown in Figure 2, the proposed K268DD site is located within the 54 dBu F(50,50) contours for KRTH(FM), Los Angeles, California, on Channel 266B; and KSCA(FM), Glendale, California, on Channel 270B.

The potential for interference from the proposed operation of K268DD to KRTH(FM) and KSCA(FM) was evaluated by determining the area in which the ratio of undesired to desired signal between the proposed operation of the translator and each of these stations equals or exceeds 40 dB, using free space propagation calculations for the translator signal.

With respect to KRTH(FM), the predicted F(50,50) signal of KRTH(FM) at the proposed K268DD site is 88.8 dBu, and interference would occur where the translator signal is 128.8 dBu (2754 mV/m) or greater. In the case of KSCA(FM), the predicted F(50,50) signal of KSCA(FM) at the proposed K268DD site is 78.2 dBu, and interference would occur where the translator signal is 118.2 dBu (813 mV/m) or greater. Computations show that, for operation at 24 watts effective radiated power and assuming uniform maximum radiation from the proposed translator in all directions in the horizontal plane, interference to KSCA(FM) would not extend beyond a distance of 42 meters from the translator antenna array.

The map of Figure 3 of this Exhibit is a portion of the USGS 7-1/2-minute topographic map showing the vicinity of the proposed K268DD site. Figure 3 depicts the proposed translator site and a circle drawn at a radius of 0.042 kilometer from the proposed translator antenna array. The part of the map showing the contour overlap has been compared for accuracy with up-to-date aerial photography from the Google Earth website.

EXHIBIT 13 (continued)

Interference Considerations

The supporting pole for the FM translator antenna array for the proposed operation of K268DD will be located at the KTYM(AM) transmitter site, in the Baldwin Hills “antenna farm.” There are no residences or occupied buildings, and no roads within the 0.042-kilometer-radius circle. This application conforms with the requirements of Section 74.1204(d) of the Commission’s Rules, as the area within the circle is unpopulated; and the proposed operation of K268DD therefore would not result in objectionable interference to either KRTH(FM) or KSCA(FM).

The site for the proposed FM translator is located within 320 kilometers of the U.S.-Mexico border. With respect to the requirements of Section 74.1235(d) of the Commission’s Rules, the proposed translator site is 200 kilometers, or more than 125 kilometers, from the international border. The maximum distance to the 60 dBu F(50,50) contour for the proposed translator is 7.8 kilometers, and the contour therefore does not fall within 116.3 kilometers of the border.

The predicted contours shown in this Exhibit were determined in accordance with the requirements of Section 73.313 of the Commission’s Rules, from computerized calculations based on the NGDC 30-second terrain database, and Figures 1 and 1a of Section 73.333 of the Rules. Distances to the contours were calculated at azimuthal increments of one degree.

Fred W. Volken
Engineering Consultant

May 2017

Sierra Madre, California

EXHIBIT 13 (continued)

Interference Considerations

TABLE A

Station Facilities

	Channel and Class	Station and Location, Status, File Number	Geographical Coordinates	Facilities	
				Effective Radiated Power and Antenna	Antenna Height Above Average Terrain (meters)
Co-Channel Stations	268D	Proposed K268DD Los Angeles, CA	N 34° 00' 25" W 118° 21' 55"	0.024 kW Directional	-----
	268D	K268DD, Los Angeles, CA Construction permit BMPFT-20170207ABP	N 34° 00' 25.8" W 118° 21' 54.3"	0.018 kW Directional	-----
	268L1	KFQM-LP, Los Angeles, CA Construction permit BNPL-20131114BDA	N 34° 02' 46.25" W 118° 33' 16.04"	0.1 kW Nondirectional	-10
	268L1	KZKA-LP, Los Angeles, CA License BLL-20161213ACH	N 34° 03' 17" W 118° 15' 31"	0.025 kW Nondirectional	56
	268L1	KHBG-LP, Pasadena, CA Construction permit BNPL-20131113BUH	N 34° 08' 36" W 118° 08' 23"	0.1 kW Nondirectional	-71
	268L1	New LPFM, El Monte, CA Construction permit BMPL-20170317AAZ	N 34° 03' 21" W 118° 06' 58"	0.1 kW Nondirectional	26

EXHIBIT 13 (continued)

Interference Considerations

TABLE A (continued)

Station Facilities

	Channel and Class	Station and Location, Status, File Number	Geographical Coordinates	Facilities	
				Effective Radiated Power and Antenna	Antenna Height Above Average Terrain (meters)
Co-Channel Stations (continued)	268L1	New LPFM, Panorama City, CA Construction permit BNPL-20131114BLZ	N 34° 15' 11" W 118° 24' 33"	0.05 kW Nondirectional	-87
	268L1	New LPFM, Pasadena, CA Construction permit BNPL-20131114AYY	N 34° 08' 17" W 118° 06' 01"	0.1 kW Nondirectional	-140
	268L1	New LPFM, Los Angeles, CA Construction permit BNPL-20131114AWZ	N 34° 02' 41" W 118° 12' 11"	0.05 kW Nondirectional	8.4
	268L1	New LPFM, Long Beach, CA Construction permit BNPL-20131114BGY	N 33° 47' 58.04" W 118° 09' 44.00"	0.005 kW Nondirectional	137
Second Adjacent Channel Stations	266B	KRTH(FM), Los Angeles, CA License BMLH-20071015AJG	N 34° 13' 38" W 118° 04' 00"	51 kW Nondirectional	955
	270B	KSCA(FM), Glendale, CA License BMLH-20111031ADQ	N 34° 13' 26" W 118° 03' 45"	4.8 kW Nondirectional	863

EXHIBIT 13 (continued)
Interference Considerations

FIGURE 1A
Co-Channel Interference
Considerations

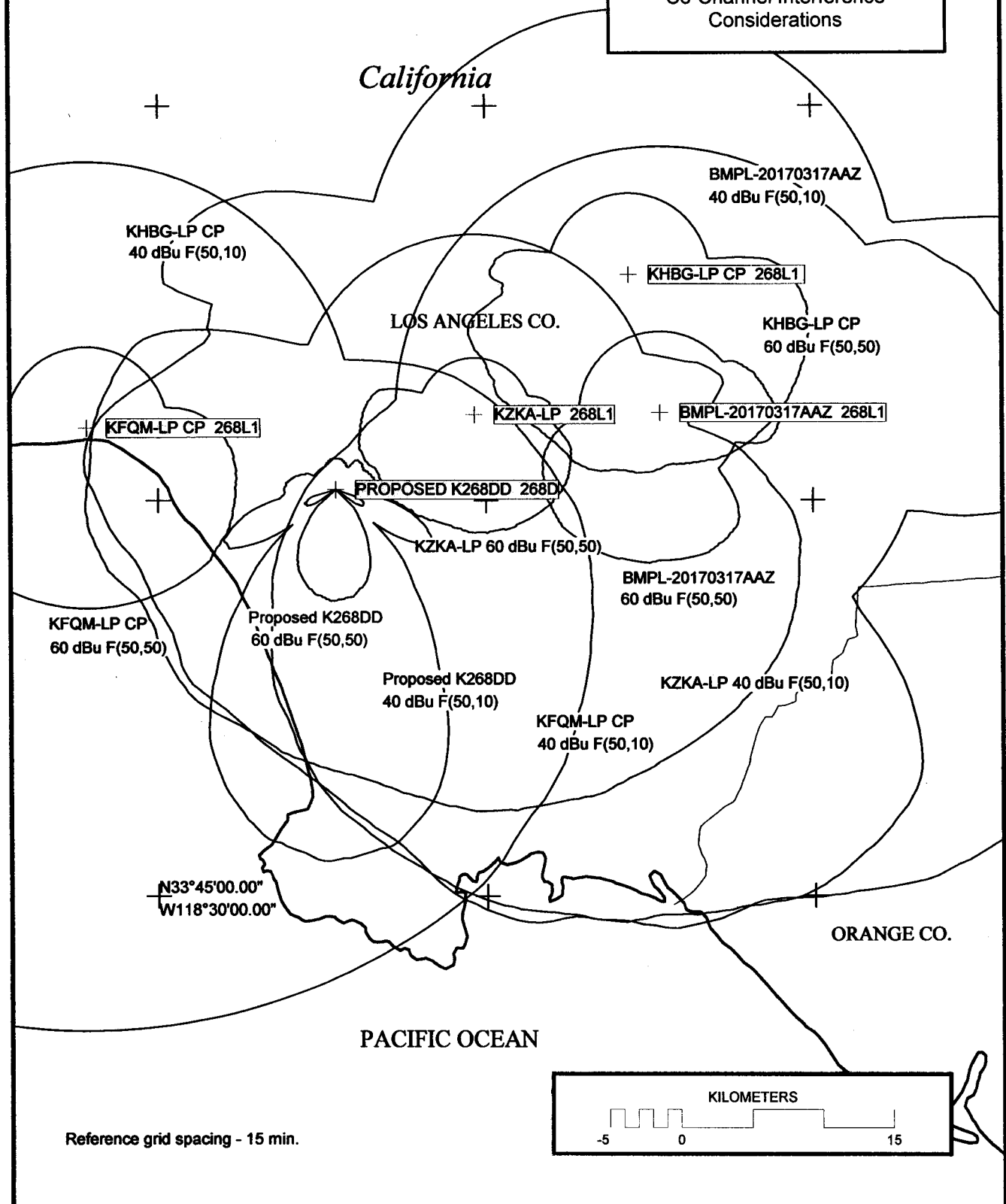
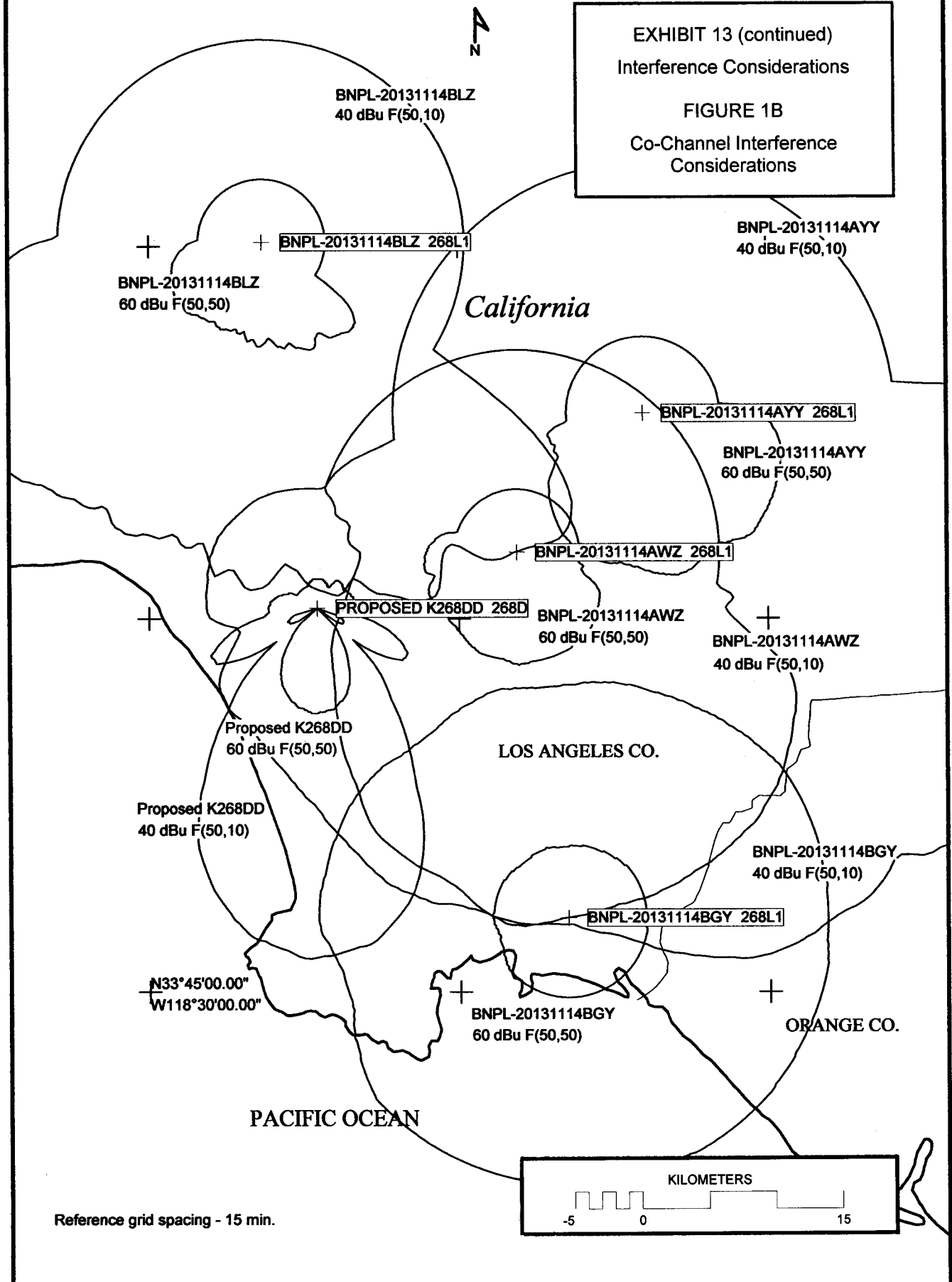


EXHIBIT 13 (continued)
Interference Considerations

FIGURE 1B
Co-Channel Interference
Considerations



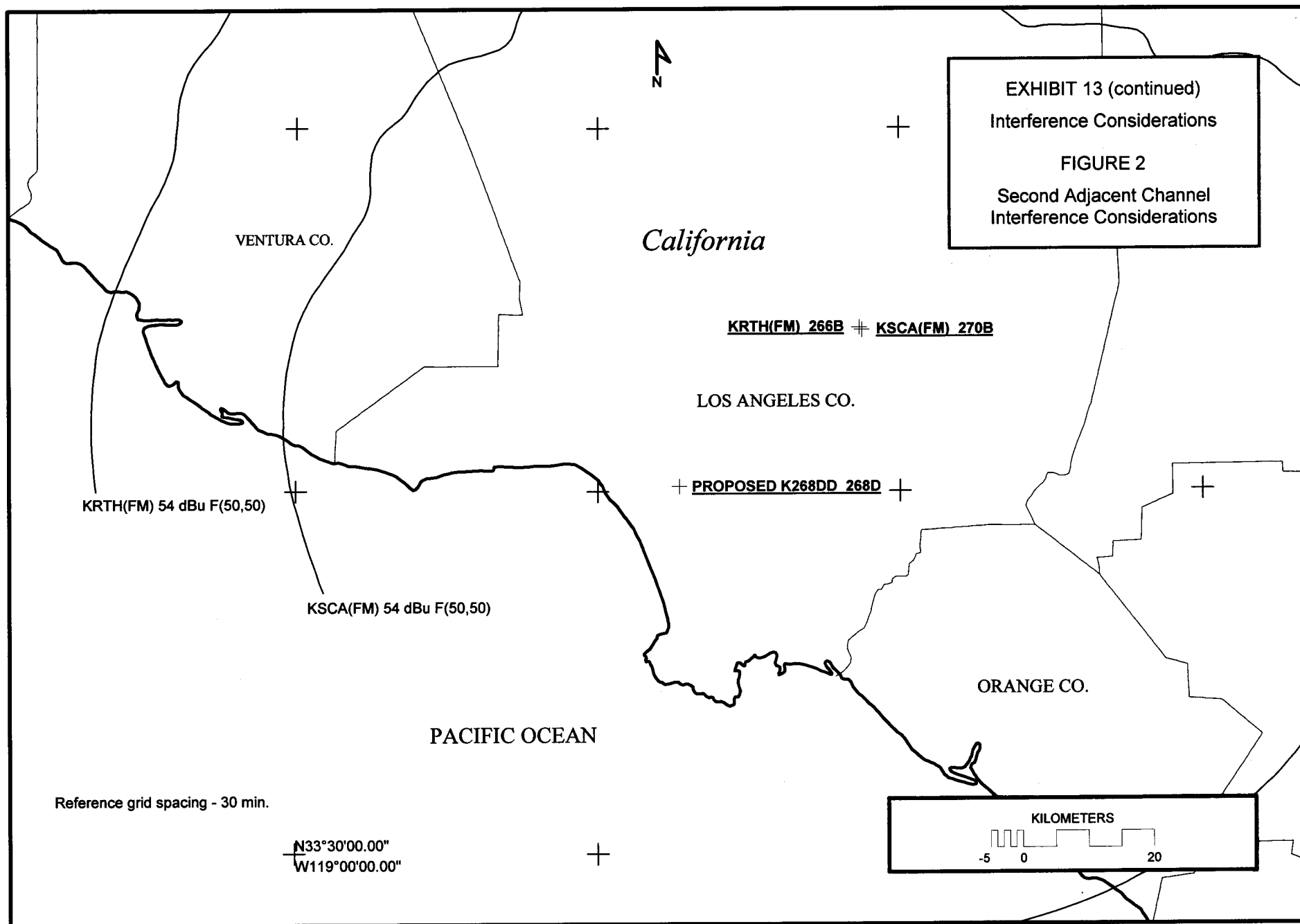


EXHIBIT 13 (continued)
Interference Considerations

FIGURE 3
Second Adjacent Channel
Interference Considerations

