

Educational Media Foundation

5700 West Oaks Boulevard ♦ Rocklin ♦ California ♦ 95765

Exhibit 13

Santa Clarita, CA

Channel Study

REFERENCE		CH# 205D - 88.9 MHz, Pwr= 0.01 kW DA, HAAT= 604.8 M, COR= 1072 M								DISPLAY DATES	
34 19 48.0 N.		Average Protected F(50-50)= 13.8 km								DATA 07-10-18	
118 35 56.0 W.		Standard Directional								SEARCH 07-10-18	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
205D	K205EP!	CP	DV	253.0	0.10	34 19 47.0	0.010			---	---
Santa Clarita		CA		73.0	BPFT20180330AAB	118 36 00.0		1133	Educational Media Foundati		
205A	KTLW	LIC	CN	34.9	70.62	34 51 03.0	5.800	86.3	28.2	-29.7*	-9.2
Lancaster		CA		215.1	BLED19970715KA	118 09 22.0	83	831	Educational Media Foundati		
205D	@990129TH	APP	DC	190.8	28.70	34 04 33.0	0.010	39.5	10.6	-11.7*	10.6
Agoura Hills		CA		10.8	BPFT19990129TH	118 39 27.0	628	863	Living Way Ministries, Inc		
205A	KXLU	LIC	HN	157.0	43.25	33 58 16.0	2.900	52.6	13.1	-10.0*	24.2
Los Angeles		CA		337.1	BLED662	118 24 56.0	3	65	Loyola Marymount Universit		
205D	K205EP!	LIC	DV	81.1	17.04	34 21 12.8	0.010			---	---
Santa Clarita		CA		261.2	BLFT20110811AAD	118 24 57.0	617	1232	Educational Media Foundati		
203B1	KCSN	LIC	DCX	105.9	4.27	34 19 10.0	0.370	0.4	11.2	2.4	-6.9*
Northridge		CA		286.0	BLED20020905AAM	118 33 15.0	501	943	California State Universit		
207B	KPCC	LIC	CX	103.1	50.38	34 13 36.0	0.600	1.7	43.1	46.5	7.2
Pasadena		CA		283.4	BMLD20090309ABE	118 03 58.0	891	1783	Pasadena Area Community Co		
06+--	KZNO-LP«										
Big Bear Lake		APP	CN	104.6	51.16	34 12 46.1	0.730	1.2	39.4	40.6R	10.6M
		CA		284.9	0000056235	118 03 41.6	-999	1680			
06---	KZNO-LP«										
Big Bear Lake		LI	CN	104.6	51.16	34 12 46.1	0.500	1.2	36.0	37.2R	14.0M
		CA		284.9	0000019005	118 03 41.6	-999	1680			
207D	KPCC-FM1	LIC	DC	75.8	25.65	34 23 10.0	0.003	0.1	7.9	17.5	17.6
Santa Clarita		CA		256.0	BLFTB20121009AAM	118 19 42.0		1506	Pasadena Area Community Co		
202B1	KCLU-FM	LIC	DCX	248.7	34.20	34 13 05.0	3.200	1.0	16.0	32.4	18.2
Thousand Oaks		CA		68.5	BLED20020307ABN	118 56 42.0	158	393	California Lutheran Univer		
06---	KZNO-LP«										
Big Bear Lake		CP	CN	104.6	51.16	34 12 47.9	0.220	1.2	29.0	30.2R	21.0M
		CA		284.9	0000011368	118 03 41.1	-999	1680			
206A	KCRU	LIC	DCX	240.5	48.78	34 06 47.0	0.850	24.7	16.5	23.2	30.7
Oxnard		CA		60.2	BLED20040422ABU	119 03 34.0	260	405	Santa Monica Community Col		
203D	KCSN-FM1	LIC	DC	150.5	34.22	34 03 41.8	0.800	1.6	9.6	32.0	24.6
West Los Angeles		CA		330.6	BLFTB20130115ADF	118 24 56.6		203	California State Universit		
207D	KPCC-FM3	LIC	DH	159.6	34.16	34 02 29.3	0.700	1.2	7.4	32.3	26.8
West Los Angeles		CA		339.6	BLFTB20170403ACT	118 28 09.0		122	Pasadena Area Community Co		
208A	KJAI	LIC	DCX	279.8	54.93	34 24 45.0	0.097	0.7	24.0	53.6	30.9
Ojai		CA		99.5	BLED20030305AAI	119 11 16.0	403	885	Southern California Public		
204B	KDRW	LIC	C	279.0	100.26	34 27 55.0	12.000	67.7	45.8	31.9	53.2
Santa Barbara		CA		98.3	BMLD20030930AMQ	119 40 37.0	264	664	Santa Monica Community Col		
207D	KPCC-FM2	LIC	DH	159.6	34.16	34 02 29.3	0.350	0.0	1.6	33.4	32.5
West Los Angeles		CA		339.6	BLFTB20170403ACU	118 28 09.0		122	Pasadena Area Community Co		

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM

Contour distances are on direct line to and from reference station. Reference Zone= East Zone 2A, Co to 3rd adjacent.

Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)

***affixed to 'IN' or 'OUT' values = site inside restricted contour.

Reference station has protected zone issue: Mexico

**Proposed K205EP versus KTLW
Terrain Shielding / Alternate Showing for interfering contour.**

“FCC” Method

The standard prediction method described in Section 73.313 of the FCC Rules was employed to develop the locations of the identified contour distances. Linearly interpolated computer database terrain data was used in these calculations. With respect to the radials, N.G.D.C TPG-0050 30 second data was employed. The FCC method only considers terrain 3 to 16 km from the antenna site.

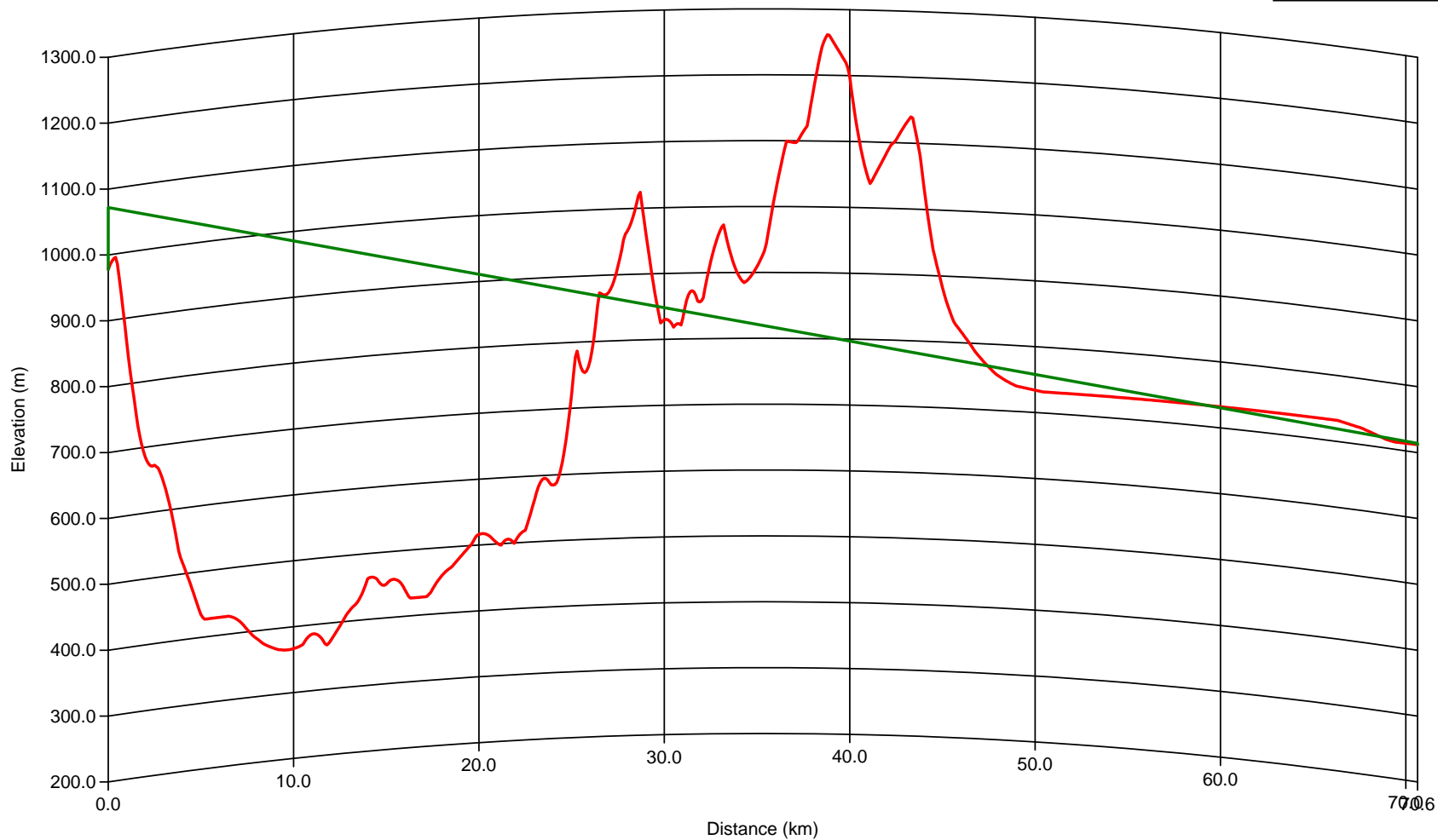
Supplemental Method

A mountain ridge separates K205EP from KTLW causing significant terrain shielding and diffraction losses at distance of approximately 38 km from the K205EP proposed transmitter site. This limits the real-world interfering contour to a distance less than the 42 km distance to KTLW's protected contour. The National Bureau of Standards Technical Note 101 provides the basis for irregular terrain modeling, for which the applicant proposes to use. The radial between K205EP and KTLW has been plotted on a map and a path study has been performed using USGS 3-arc second data and the V-Soft Probe 4 profile tool. As can be seen, the terrain (shown in red on Exhibit 13-A1) clearly blocks the line of sight from the proposed translator's location toward KTLW.

The terrain varies so widely between these two facilities (delta H is calculated to be 690.95 average) that an alternate propagation method is warranted. Exhibit 13-A2 shows the Longley Rice calculated 40db contour, using a 3-second terrain database to provide more accuracy. As can be seen, the calculated 40db contour will not cause prohibited overlap with KTLW's protected contour.

Therefore, EMF respectfully requests that the proposed K205EP facility be granted.

Terrain Profile



Start Latitude: 34-19-48 N
Start Longitude: 118-35-56 W

End Latitude: 34-51-03 N
End Longitude: 118-09-22 W

Distance: 70.63 km
Bearing: 34.99 deg

Exhibit 13-A2

K205EP.P

Latitude: 34-19-48 N
Longitude: 118-35-56 W
ERP: 0.01 kW
Channel: 205
Frequency: 88.9 MHz
AMSL Height: 1072.0 m
Horiz. Pattern: Directional
Prop Model: Longley-Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 2.0 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast

KTLW

BLED19970715KA
Latitude: 34-51-03 N
Longitude: 118-09-22 W
ERP: 5.80 kW
Channel: 205
Frequency: 88.9 MHz
AMSL Height: 831.0 m
Horiz. Pattern: Omni

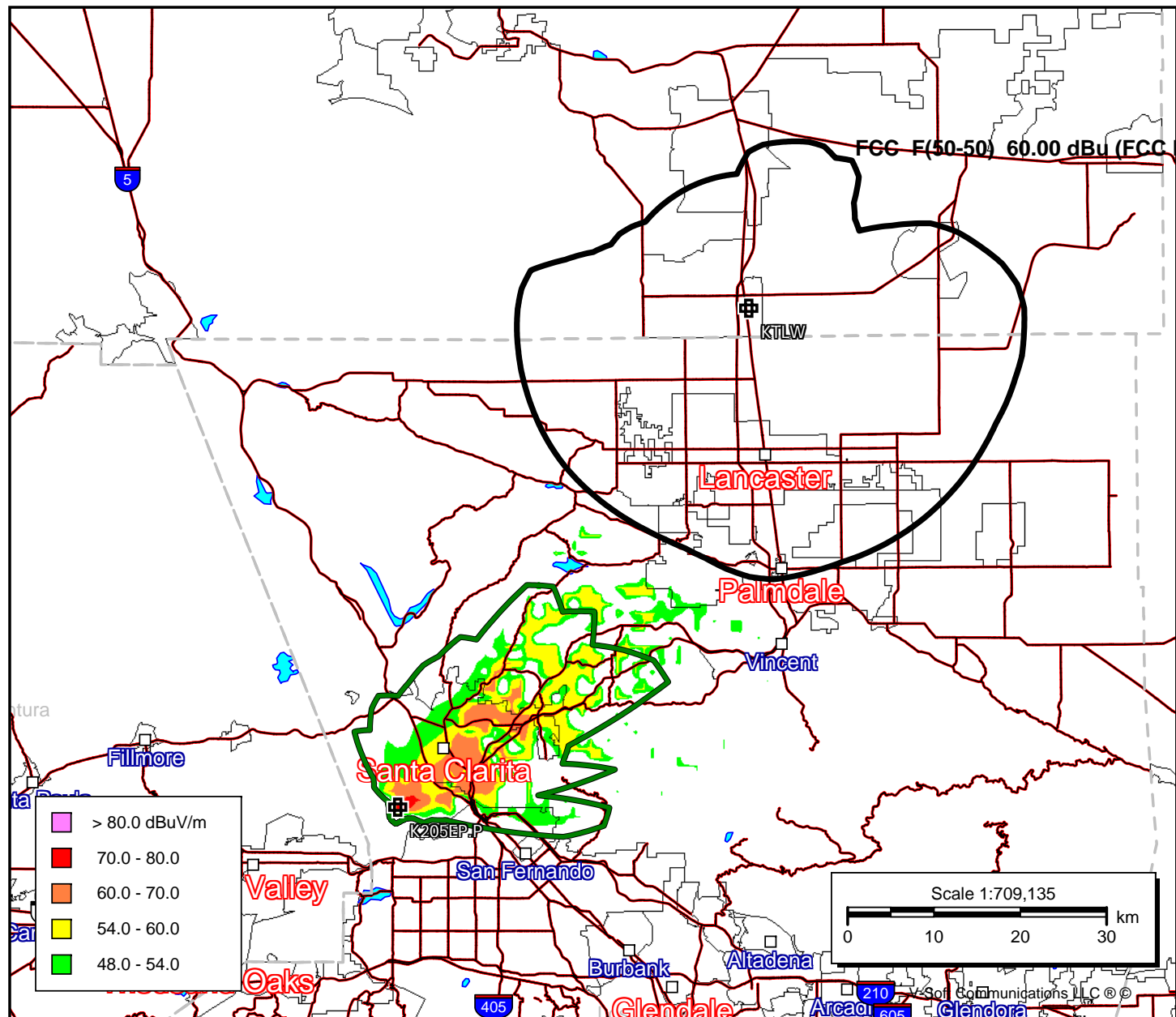


Exhibit 13-B

FMCommander Single Allocation Study - 07-10-2018 - FCC NGDC 30 Sec
K205EP.P's Overlaps (In= -11.68 km, Out= 10.59 km)

K205EP.P CH 205 D DA
Lat= 34 19 48.0, Lng= 118 35 56.0
0.01 kW 604.8 m HAAT, 1072 m COR
Prot.= 60 dBu, Intef.= 40 dBu

990129TH CH 205 D DA BPFT19990129TH
Lat= 34 04 33.0, Lng= 118 39 27.0
0.01 kW 627.7 m HAAT, 863 m COR
Prot.= 60 dBu, Intef.= 40 dBu



Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station KCSN, channel 203B1, Northridge, CA. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for K205EP.P:	10 watts
The proposed COR for K205EP.P:	5 meters
KCSN F(50/50) contour at proposed site:	75.5 dBu
The F(50/10) contour of proposed K205EP.P	115.5 dBu

As can be seen in the attached exhibit, the potential interfering contains no population and does not reach any nearby occupied structure (see Exhibit 13-C1).

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

Exhibit 13-C1

K205EP.P 115.5 db interfering contour

Legend

-  16.1km Circle
-  K205EP.P
-  Oat Mountain

Palo Sola Truck Rd

K205EP.P

Google Earth

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400 ft