

TECHNICAL STATEMENT  
K291CI PHOENIX, ARIZONA  
MOUNTAIN COMMUNITY TRANSLATORS, LLC  
FCC FORM 349  
JANUARY 2016

This Technical Statement is made in support of a minor change application for FM translator station K291CI at Baker, California, facility ID 148238. K291CI seeks to relocate its current authorization by less than 250 miles (246 miles) and become a fill-in translator for KASA(AM) Phoenix, Arizona, facility ID 33451. This proposal which is normally a major change move is in response to the Commissions AM Revitalization Order DA-1491 released 12/23/2015. The following will show that the new proposed operation of K291CI will meet all of the Commissions technical requirements for an FM translator station.

The proposed operation of K291CI specifies an Effective Radiated Power of 0.001 kilowatts. It will operate with a directional antenna with an “off the shelf” type antenna, or a Scala HDCA5-CP/RM with dual polarization. The antenna will be mounted on an existing tower at the KASA(AM) tower site, with an overall height of 49 meters above the ground. The antenna will be mounted with a Center of Radiation of 47 meters above the ground, and 394 meters Above Mean Sea Level. The coordinates of this tower are located at N 33° 22’ 36”, W 112° 05’ 25”, NAD 27.

Figure 1 is a detailed interference study conducted on channel 294D with these new proposed facilities. It shows that the new operation of K291CI will not cause any interference to any existing or proposed FM stations on any of the pertinent same channel

or adjacent channels to channel 294, with the exception of 2<sup>nd</sup> adjacent channel station KVVA-FM Apache Junction, Arizona operating on channel 296C3, facility ID 1331.

The proposed operation of K291CI on 294D is located within the protected 60 dBμ contour of 2nd adjacent channel of KVVA-FM. The predicted F(50-50) field strength of KVVA-FM at the proposed K291CI transmitter site is 62.8 dBμ. Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K291CI on channel 294D is an additional 40 dBμ or 102.8 dBu.

Figure 2 shows the coverage area for the worse case 100 dBμ interference contour F(50-10) and shows that there is no population in the area of interference. This contour only extends less than 53 meters, or will only touch the ground in a few located directly under the tower base as the Center of Radiation is 47 meters above the ground. The applicant, Mountain Community Translators, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the proposed existing tower site, which is a privately owned with private access. The transmitter building is uninhabited and does not have indoor plumbing. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K291CI until such interference can be eliminated.

Figure 3 is the directional antenna data for the proposed Scala HDCA-5/CP antenna system proposed to be used.

The proposed operation of K291CI Phoenix will be considered a “Fill-In” operation for Class D AM station KASA Phoenix, Arizona. KASA(AM) operates with 10 kilowatts daytime with a directional antenna system on 1540 kHz. Figure 4 shows

that the proposed 60 dB $\mu$  contour for the proposed K291CI will not extend beyond the daytime 2.0 mV/m contour of KASA. It will also not extend beyond a 25 miles radius from the KASA tower site. Since this is a “Fill-In” translator, the maximum ERP will not exceed the maximum permissible ERP of 250 watts in any azimuth.

It was found that the new proposed operation of K291CI Phoenix, Arizona on channel 294D, will satisfy all of the required commission rules and regulations for an FM translator station.

Figure 1 - Detailed Channel Interference Study

K291CI Phoenix, Arizona, Ch. 294D Average Protected F(50-50)= 1.82 km Standard Directional											
REFERENCE 33 22 36.0 N. 112 05 25.0 W.											
CH# 294D - 106.7 MHz, Pwr= 0.001 kW DA, HAAT= 26.9 M, COR= 394 M DISPLAY DATES DATA 01-28-16 SEARCH 01-28-16											
CH CITY	CALL	TYPE STATE	ANT AZ	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
294C3 Buckeye	AL9806	---	---	256.5 76.3	41.15	33 17 23.0 112 31 12.0	25.000 100	111.3 431	36.7	-71.1*	1.0
296C3 Apache Junction	KVVA-FM	LIC _CX AZ	---	79.9 260.1	44.22 BLH20130315ABB	33 26 44.0 111 37 19.0	17.000 124	5.3 651	49.9	37.0	-5.7*
295A Buckeye	KDVA	LIC _CN AZ	---	280.0 99.7	48.05 BLH19980814KB	33 27 01.0 112 35 58.0	6.000 93	52.1 472	34.8	-4.7*	12.1
294C2 Prescott Valley	KPPV	LIC _CN AZ	---	341.9 161.6	130.13 BLH19930204KB	34 29 25.0 112 32 00.0	3.700 493	132.0 2181	54.8	-2.9*	72.4
294C0 Pinetop	KNKI	RSV-A AZ	---	70.6 251.9	224.84	34 01 36.0 109 47 35.0	100.000 450	212.2 2799	100.4	10.6	118.3
292C2 Sun City	KOMR	LIC _CN AZ	---	331.1 150.9	73.53 BLH19961025KC	33 57 21.0 112 28 34.0	23.000 221	6.6 1098	57.8	65.8	15.8
293L1 Mesa	1625776	APP AZ	---	75.7 255.9	34.48 BNPL20131112AHV	33 27 10.0 111 43 51.0	0.068 36	457	21.2	23.8	23.8
294D Morristown	K294CO	CP DV AZ	---	321.4 141.2	62.67 BNPFT20130829AAG	33 49 01.0 112 30 49.0	0.140 -28	37.7 585	11.1	24.0	48.4
293A Arizona City	KKMR	LIC _CN AZ	---	144.9 325.2	73.50 BLH19970102KC	32 50 04.0 111 38 15.0	6.000 89	43.9 537	28.4	28.6	43.5
297C2 Aguila	1690851	APP _CX AZ	---	305.6 125.1	100.17 BMPH20151022AFO	33 53 49.6 112 58 21.6	50.000 150	6.3 904	54.6	93.6	45.5
294C Nogales	XHSNFM	---	---	154.4 335.0	251.56	31 19 51.0 110 56 45.0	100.000 600	204.2 1876	92.0	46.3	157.3
297C2 Aguila	NEW	CP ZCX AZ	---	310.9 130.5	96.61 BNPH20070403ACO	33 56 36.0 112 52 53.0	50.000 150	5.1 929	46.2	91.0	50.4
295C Show Low	AL6595	RSV-A AZ	---	64.5 245.7	219.29 RMNS-155	34 12 20.0 109 56 26.0	100.000 600	141.2 2679	95.5	76.0	120.9
294C1 Pinetop	KNKI	LIC _C AZ	---	66.5 247.9	251.44 BLH20100426AAU	34 15 06.0 109 35 06.0	65.000 357	166.7 2600	71.1	82.7	173.9
295D Little Acres	K295AL	LIC _C AZ	---	94.2 274.9	117.15 BLFT20070323AIE	33 17 37.0 110 50 09.0	0.015 1039	32.4 2378	19.8	83.2	95.3
291A Miami	R12465	ADD AZ	---	88.0 268.7	119.73	33 24 30.0 110 48 14.0	6.000 100	3.3 1362	35.0	114.9	84.7

Terrain database is 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= West Zone, Co to 3rd adjacent.  
 All separation margins (if shown) include rounding.  
 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- AM tower

\* No actual interference will be caused to second adjacent channel KVVA-FM since the 100 dbu interference contour will not cover any population. See the technical statement for more details.

Figure 2 - Predicted 100 dbu contour  
K291CI Phoenix, Arizona, Ch. 294D

Coverage Study - NGDC 30 SEC  
01-29-2016

K291CI CH294 D , 0.001 kW, 26.9m HAAT, 394.0m COR  
AMSL Interference Contour = 100 dBu. Population = 0

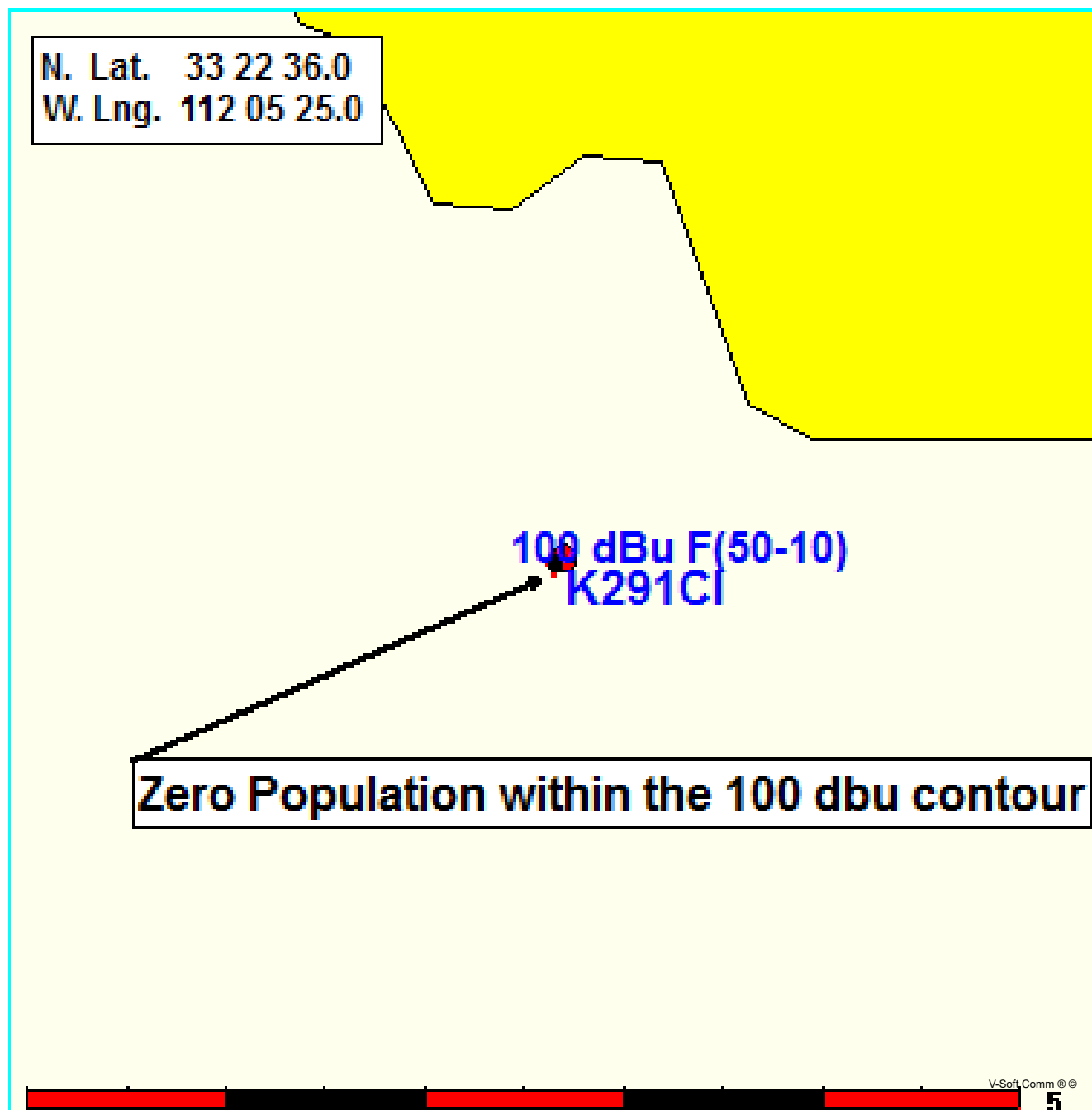


FIGURE 3 - DA ANTENNA DATA

K291CI

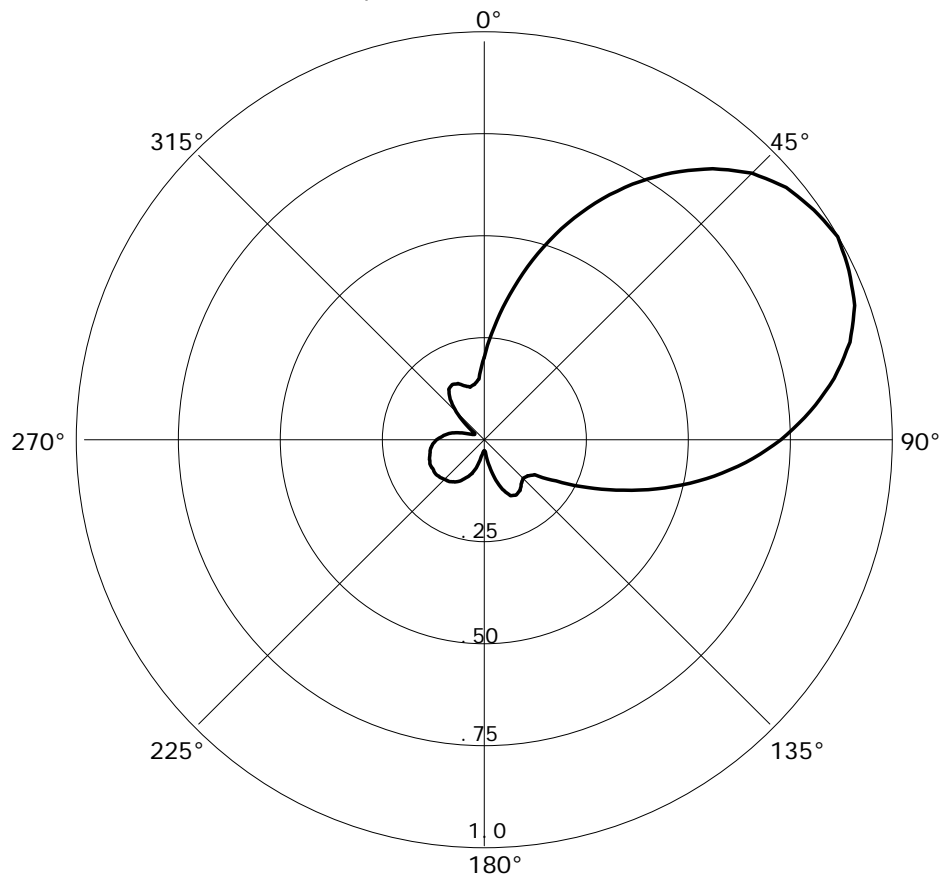
01-29-2016

RMS(V) = .431

SCALA HDCA-5CP/RM

Graph is Relative Field

Azi	Field	dBk	kW
000	0.203	-43.850	0.000
010	0.363	-38.802	0.000
020	0.553	-35.145	0.000
030	0.727	-32.769	0.001
040	0.871	-31.200	0.001
050	0.966	-30.300	0.001
060	1.000	-30.000	0.001
070	0.966	-30.300	0.001
080	0.871	-31.200	0.001
090	0.727	-32.769	0.001
100	0.553	-35.145	0.000
110	0.363	-38.802	0.000
120	0.203	-43.850	0.000
130	0.138	-47.202	0.000
140	0.141	-47.016	0.000
150	0.157	-46.082	0.000
160	0.130	-47.721	0.000
170	0.060	-54.437	0.000
180	0.027	-61.373	0.000
190	0.042	-57.535	0.000
200	0.088	-51.110	0.000
210	0.117	-48.636	0.000
220	0.134	-47.458	0.000
230	0.143	-46.893	0.000
240	0.145	-46.773	0.000
250	0.143	-46.893	0.000
260	0.134	-47.458	0.000
270	0.117	-48.636	0.000
280	0.088	-51.110	0.000
290	0.042	-57.535	0.000
300	0.027	-61.373	0.000
310	0.060	-54.437	0.000
320	0.130	-47.721	0.000
330	0.157	-46.082	0.000
340	0.141	-47.016	0.000
350	0.138	-47.202	0.000



**K291CI**

BLFT20151215AFK

Latitude: 33-22-36 N

Longitude: 112-05-25 W

ERP: 0.001 kW

Channel: 294

Frequency: 106.7 MHz

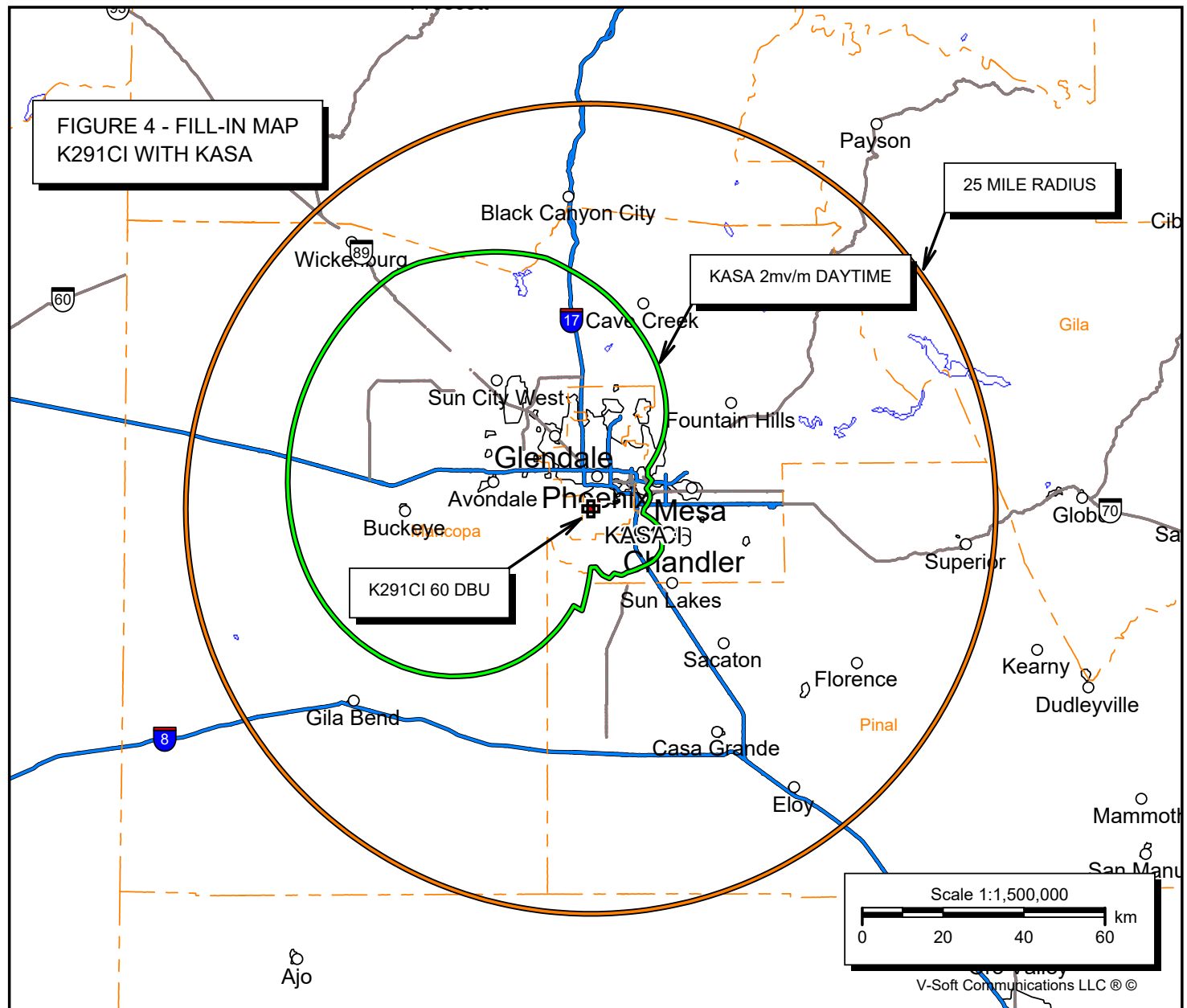
AMSL Height: 394.0 m

Elevation: 341.946 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

**FIGURE 4 - FILL-IN MAP  
K291CI WITH KASA**

**K291CI**

BLFT20151215AFK

Latitude: 33-22-36 N

Longitude: 112-05-25 W

ERP: 0.001 kW

Channel: 294

Frequency: 106.7 MHz

AMSL Height: 394.0 m

Elevation: 341.946 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

**FIGURE 4A - FILL-IN MAP  
K291CI WITH KASA (detailed)**