

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of GILA RIVER TELECOMMUNICATIONS, INC. ("GRTI"), the licensee of digital Low Power Television Station KGRQ-LD, Channel 29, serving the Gila River Indian Community in Arizona, in support of its request for Special Temporary Authority (STA) to construct the facility specified in its pending displacement Application for Construction Permit LMS-0000054259, which proposes operation on Channel 21 from a new site. This station is being displaced as a result of the spectrum auction and the resulting significant predicted interference to and from KTAZ-DT, which has been assigned repack Channel 29 in Phoenix, Arizona, just 31 kilometers from the transmitter site of KGRQ-LD. As shown below, it is believed that the new KGRQ-LD facility on Channel 21 can be granted.

It is proposed to mount a broadband directional antenna at the 33.5-meter level of an existing 36.5-meter tower atop Sacaton Peak within the Gila River Indian Community. The proposed effective radiated power for the facility is 15.0 kW in horizontal plane. Exhibit B is a map upon which the predicted 51 dBu service contour for the proposed Channel 21 facility is plotted.

Attached, as Exhibit C, is a summary report from a TVStudy interference analysis for the proposed STA facility. Our study employed a cell size of 1.0 kilometer and increment spacing of 1.0 kilometer. Further the applicant proposes use of a full-service mask filter. The results indicate that the proposed KGRQ-LD facility on Channel 21 meets the Commission's interference requirements to all full-power, Class A, translator and low-power co-channel and adjacent-channel television facilities, except for three instances.

EXHIBIT A

As shown in the study, the facility proposed herein (as well as the identical proposal in LMS-0000054259) causes predicted impermissible interference to KGRY-LD, Channel 21 in Gila River Indian Community (BLDTL-20150107ADW), a pending application for a new LPTV station on Channel 21 in the same community (BNPDT-20100713APP), but at a different site than that of KGRY-LD, and a displacement application for KFPB-LD in Globe, Arizona (LMS-0000051968). It is important to note that the study also causes interference to the pending KGRQ-LD displacement application referenced above, but can obviously be ignored.

Both KGRY-LD and the pending application on Channel 21 (BNPDTL-201007ADW) are co-owned by the licensee of KGRQ-LD and the interference between these facilities is acknowledged and accepted. In addition, the instant applicant recently requested that the FCC dismiss the pending Channel 21 application. On August 31, 2018, the FCC dismissed BNPDTL-20150107ADW. Therefore, these situations can be ignored by the Commission and do not adversely affect the grantability of the facility proposed herein.

With respect to the KFPB-LD application LMS-0000051968, the owners of KGRQ-LD and KFPB-LD (Globe LPTV LLC) have entered into an agreement whereby KFPB-LD is being assigned the facilities of GRTI's station K30MM-D, an authorization which can be modified to meet the displacement needs of KFPB-LD, in exchange for the dismissal of the mutually exclusive KFPB-LD application on Channel 21. A copy of the agreement between these two stations, as well as the K30MM-D assignment application (BAPDTL-20180824AAT), is attached to this STA application.

In addition, it is believed that the proposed facility causes no predicted interference to any Mexican television station or allotment.

A detailed power density calculation is provided in Exhibit D.

Since no change in the overall height or location of an existing tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, due to the diminutive height of the tower and its proximity to the nearest airport runway, FCC antenna structure registration is not required for the tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K" and "F" and a smaller "T" in the middle.

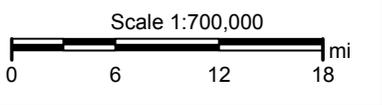
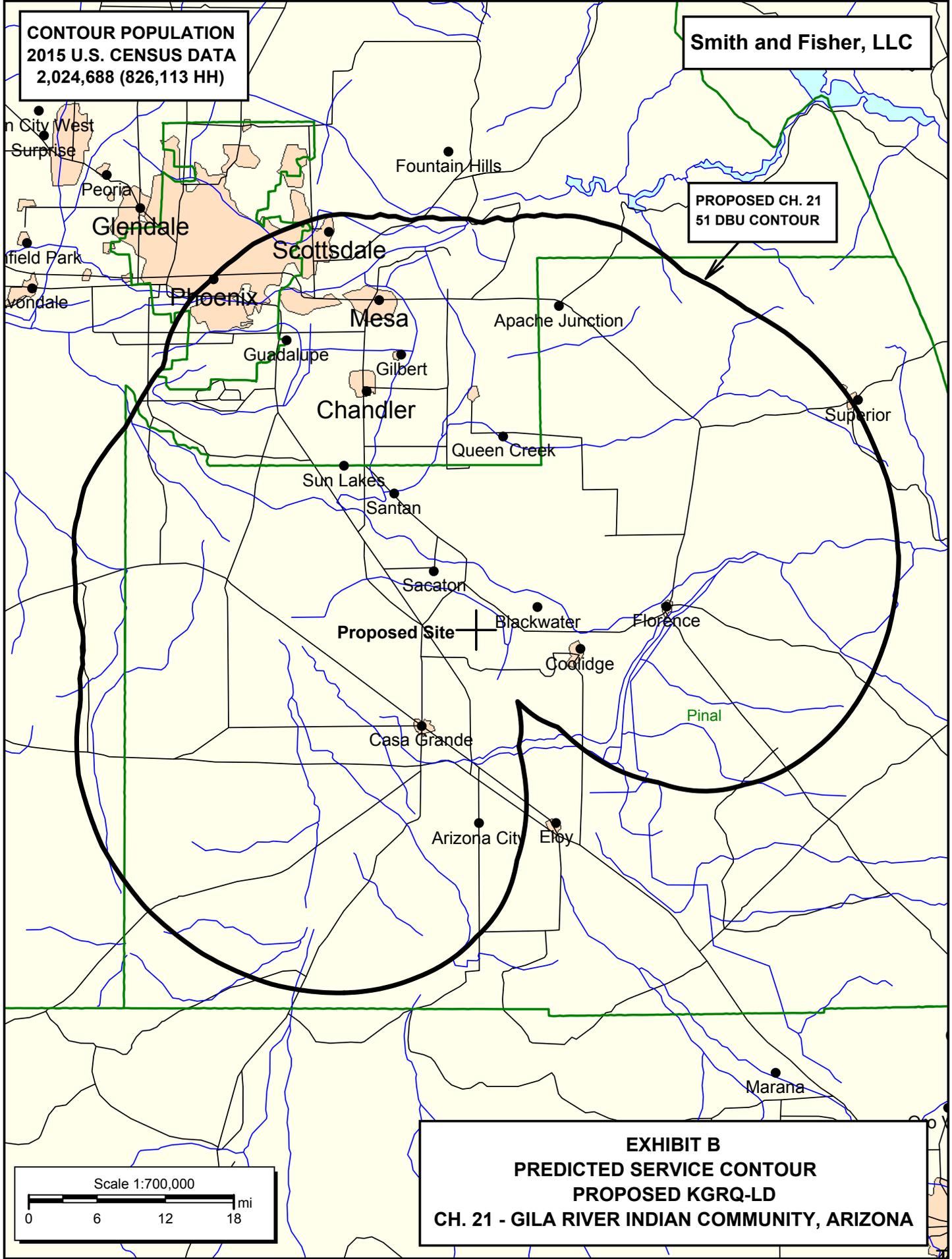
KEVIN T. FISHER

September 10, 2018

**CONTOUR POPULATION
2015 U.S. CENSUS DATA
2,024,688 (826,113 HH)**

Smith and Fisher, LLC

**PROPOSED CH. 21
51 DBU CONTOUR**



**EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED KGRQ-LD
CH. 21 - GILA RIVER INDIAN COMMUNITY, ARIZONA**

TVSTUDY INTERFERENCE ANALYSIS RESULTS
 PROPOSED KGRQ-LD STA
 CHANNEL 21 – GILA RIVER INDIAN COMMUNITY, ARIZONA

Study created: 2018.09.05 10:52:20

Study build station data: LMS TV 2018-07-31

Proposal: KGRQ-LD D21 LD APP GILA RIVER INDIAN CO, AZ
 File number: BLANK0000054259
 Facility ID: 187708
 Station data: User record
 Record ID: 327
 Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	KPAZ-TV	D20	DT	LIC	PHOENIX, AZ	BLCDT20131121AHS	51.6 km
No	K21GE	N21-	TX	LIC	CAMP VERDE, AZ	BLTT20040830AAI	164.2
Yes	K21GE	D21	LD	CP	CAMP VERDE, AZ	BDFCDTL20120524AAC	164.2
No	K42IQ-D	D21	LD	APP	FLAGSTAFF, AZ	BLANK0000029581	249.0
Yes	NEW	D21	LD	APP	GILA RIVER INDIAN CO, AZ	BNPDTL20100713APP	21.3
Yes	KGRY-LD	D21	LD	LIC	GILA RIVER INDIAN CO, AZ	BLDTL20150107ADW	9.8
Yes	KFPB-LD	D21	LD	APP	GLOBE, AZ	BLANK0000051968	51.8
No	K21EG-D	D21	LD	LIC	GOLDEN VALLEY, AZ	BLDTT20130308ABB	340.4
No	K21EA-D	D21	LD	LIC	LAKE HAVASU CITY, AZ	BLDTT20130308ABO	306.1
No	NEW	D21	LD	APP	PARKER, AZ	BNPDTL20100514ADI	248.7
Yes	KRPO-LD	D21	LD	LIC	QUARTZSITE, AZ	BLDTL20110926AEA	197.6
No	KRPO-LD	D21	LD	APP	QUARTZSITE, AZ	BPDTL20120606AAC	150.4
Yes	K21GC	N21-	TX	LIC	SAFFORD, AZ	BLTT20060215AAV	174.9
Yes	KWBA-TV	D21	DT	CP	SIERRA VISTA, AZ	BLANK0000026780	160.6
No	K21FU-D	D21	LD	LIC	TOPOCK, AZ	BLDTT20130308ACK	335.9
Yes	K21CX-D	D21	LD	LIC	TUCSON, AZ	BLDTL20110727AGJ	110.9
No	NEW	D21	LD	APP	WINTERHAVEN, CA	BNPDTL20100510AAG	308.5
No	K48HL-D	D21	LD	APP	DATIL/HORSE SPRINGS, NM	BLANK0000053911	364.4
No	NEW	D21	LD	APP	LUFKIN, TX	BMJADTL20100517AAU	358.8
No	KNAZ-TV	D22	DT	LIC	FLAGSTAFF, AZ	BLCDT20091210AAC	219.1
No	K22JD-D	N22-	TX	LIC	MADERA PEAK, AZ	BLTT20091029ABD	83.7
No	K22JD-D	D22	LD	LIC	MADERA PEAK, AZ	BLANK0000033767	83.7

No	KPSN-LD	D22	LD LIC	PAYSON, AZ	BLDTL20120430AAZ	150.0
Yes	KPDF-CA	D22	DC CP	PHOENIX, AZ	BLANK0000034612	51.6
Yes	KTVP-LD	D22	LD LIC	PHOENIX, AZ	BLDTL20140813AAG	51.8
No	KCOS-LP	N28-	TX LIC	PHOENIX, AZ	BLTTL19990325JD	54.8
No	KPCE-LP	N29-	TX LIC	TUCSON, AZ	BLTTL20080605AAT	98.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D21
Mask: Full Service
Latitude: 33 0 6.90 N (NAD83)
Longitude: 111 40 28.00 W
Height AMSL: 858.3 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: MCI-955218 (ID 1003653) 330.0 deg
Elev Pattn: Generic

49.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	8.57 kW	404.8 m	59.5 km
45.0	11.4	433.1	62.5
90.0	7.97	432.4	60.3
135.0	0.050	427.4	29.8
180.0	0.713	416.2	45.5
225.0	12.7	419.3	62.5
270.0	8.57	360.0	57.4
315.0	11.4	436.0	62.7

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 416 m

Distance to Canadian border: 1777.8 km

**Proposal is within coordination distance of Mexican border

Distance to Mexican border: 154.0 km

Conditions at FCC monitoring station: Douglas AZ

Bearing: 130.8 degrees Distance: 252.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 34.1 degrees Distance: 976.2 km

No land mobile station failures found

Study cell size: 1.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

**MX with BNPDTL20100713APP APP scenario 1, 71.25% interference caused

**IX check failure to BLDTL20150107ADW LIC scenario 1, 78.10% interference caused

**MX with BLANK0000051968 APP scenario 1, 38.48% interference caused

**MX with BLANK0000051968 APP scenario 2, 38.48% interference caused

---- Below is IX received by proposal BLANK0000054259 ----

**MX with scenario 1, 89.95% interference received

POWER DENSITY CALCULATION

PROPOSED KGRQ-LD
CHANNEL 21 – GILA RIVER INDIAN COMMUNITY, ARIZONA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to the facility proposed herein. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15.0 kW, an antenna radiation center 33.5 meters above ground, and assuming a vertical relative field value of 10 percent at the steeper elevation angles for the existing MCI antenna, maximum power density two meters above ground of 0.0051 mW/cm² is calculated to occur near the south-southwest base of the tower. Since this is only 1.5 percent of the 0.34 mW/cm² reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 21 (512-518 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.