

August 2023
FM Translator K220GL
Pleasanton, TX Channel 220D
Allocation Study

Allocation Study

The attached spacing study shows the spacing between the proposed translator site and the location of cochannel and adjacent channel stations and proposals. This study was made with the Commission's Class A spacing requirements, and individual situations were examined to determine the lack of prohibited contour overlap per the requirements of §74.1204 of the Rules. The attached allocation study map demonstrates compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204.

The attached spacing study demonstrates compliance with §73.207 of the Commission's Rules regarding spacing restrictions to stations which are 53 or 54 channels removed from the proposed operation.

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SEARCH PARAMETERS

FM Database Date: 20230811

Channel: 220A 91.9 MHz

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Latitude: 28 54 43.3 (NAD83)

Longitude: 98 26 29.5

Safety Zone: 50 km

Job Title: K220GL ASR 1050418

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KZLV LIC	LYTLE TX	BLED-20021002ACB	217C2 91.3	50.000 150.0	DA 29 14 39.9 98 44 28.1	321.8	46.99 -8.01	55 SHORT
K219LI LIC	KENEDY TX	BLFT-20090813ACQ	219D 91.7	0.150 0.0	28 51 40.9 97 54 21.0	96.0	52.56 0.00	0 TRANS
KQBI LIC	ENCINAL TX	BLED-20130628AIR	219A 91.7	3.000 17.8	28 8 33.0 99 19 27.1	225.4	121.40 49.40	72 CLEAR
KRTU-FM LIC	SAN ANTONIO TX	BLED-20170410AAS	219C2 91.7	30.000 194.2	DA 29 31 25.8 98 43 26.1	338.1	73.16 -32.84	106 SHORT
KHPO LIC	PORT O'CONNOR TX	BLED-20160205AEL	220C2 91.9	35.000 94.0	28 26 18.1 96 26 55.5	104.7 SS	201.73 35.73	166 CLEAR
K220GL LIC	PLEASANTON TX	BLFT-19991122ACP	220D 91.9	0.050 0.0	28 57 51.8 98 28 56.0	325.8	7.03 0.00	0 TRANS
K220KA LIC	KERRVILLE TX	BLFT-20171130AAV	220D 91.9	0.062 0.0	30 2 37.8 99 7 17.1	332.6	141.72 0.00	0 TRANS
CP	GONZALES TX	0000166682	220C3 91.9	20.000 37.0	DA 29 30 36.4 97 24 51.6	56.0 SS	119.88 -22.12	142 SHORT
KLLR LIC	DRIPPING SPRINGS TX	BLED-20150825AAC	220A 91.9	2.000 86.0	30 11 58.7 98 11 29.1	9.5 SS	144.76 29.76	115 CLEAR
KCAF-FM LIC	KENEDY TX	BLH-20170201ADK	221A 92.1	5.500 79.0	28 45 47.9 97 53 29.0	107.0	56.16 -15.84	72 SHORT

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SEARCH PARAMETERS

FM Database Date: 20230811

Channel: 220A 91.9 MHz

Page 2

Latitude: 28 54 43.3 (NAD83)

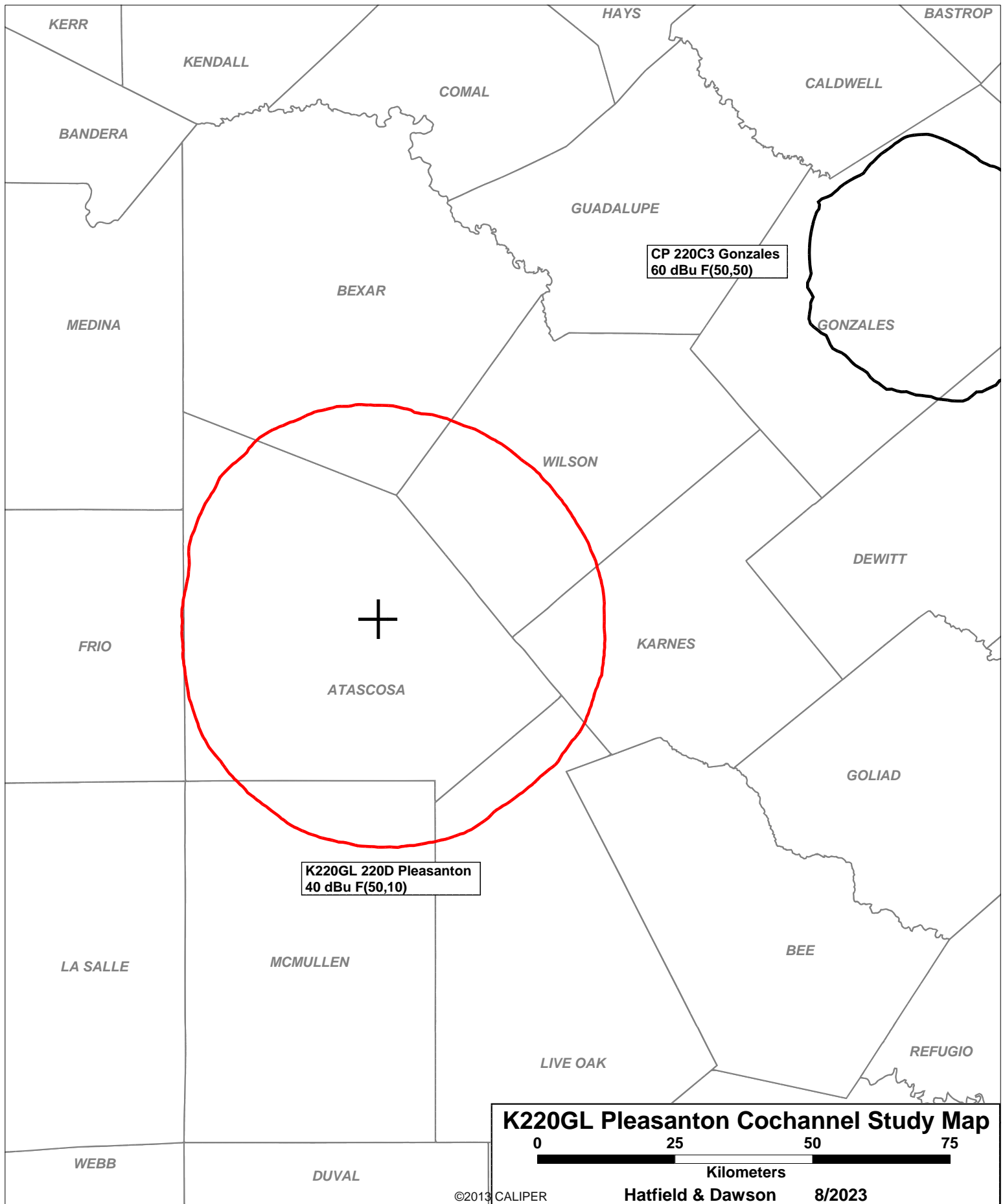
Longitude: 98 26 29.5

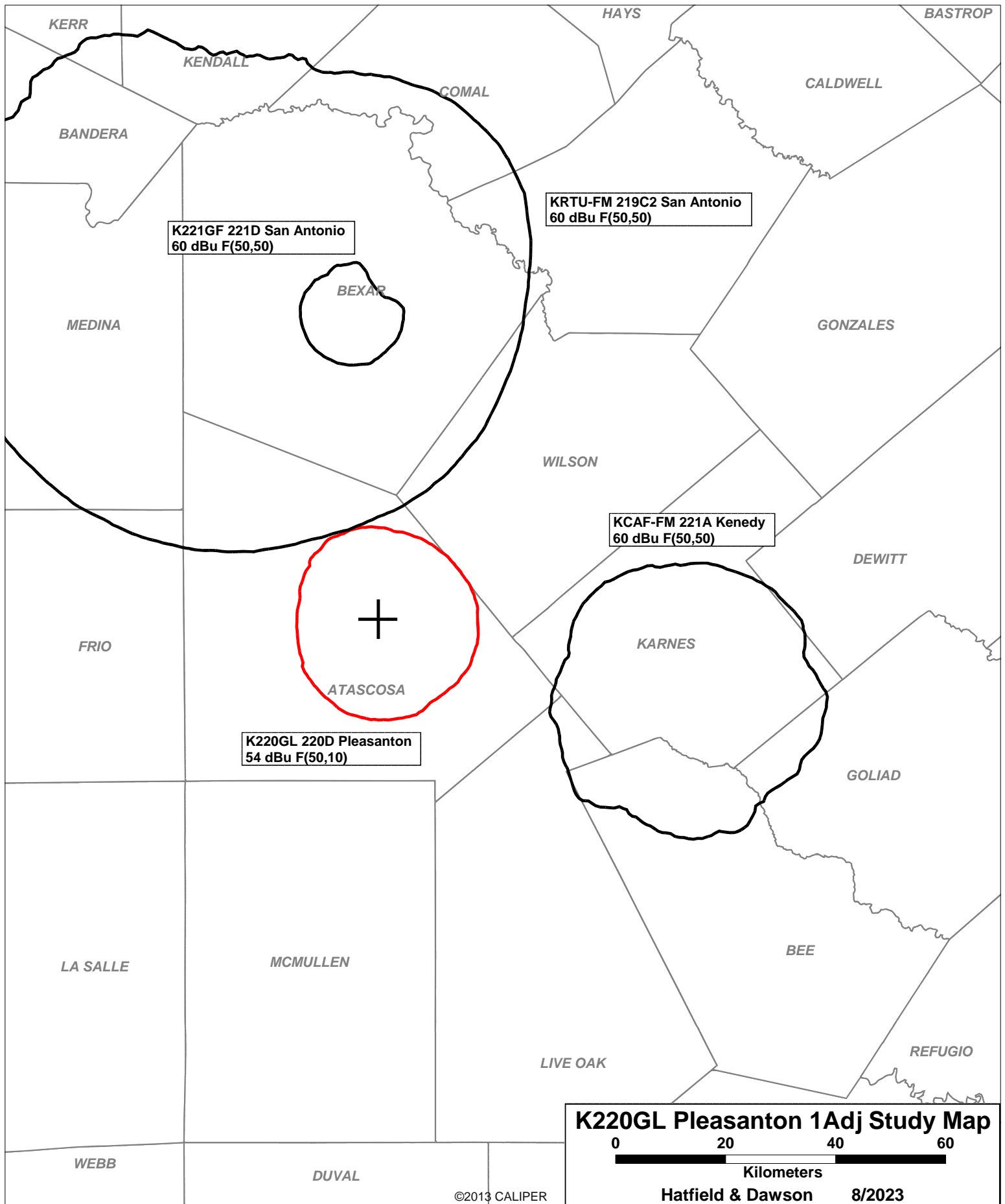
Safety Zone: 50 km

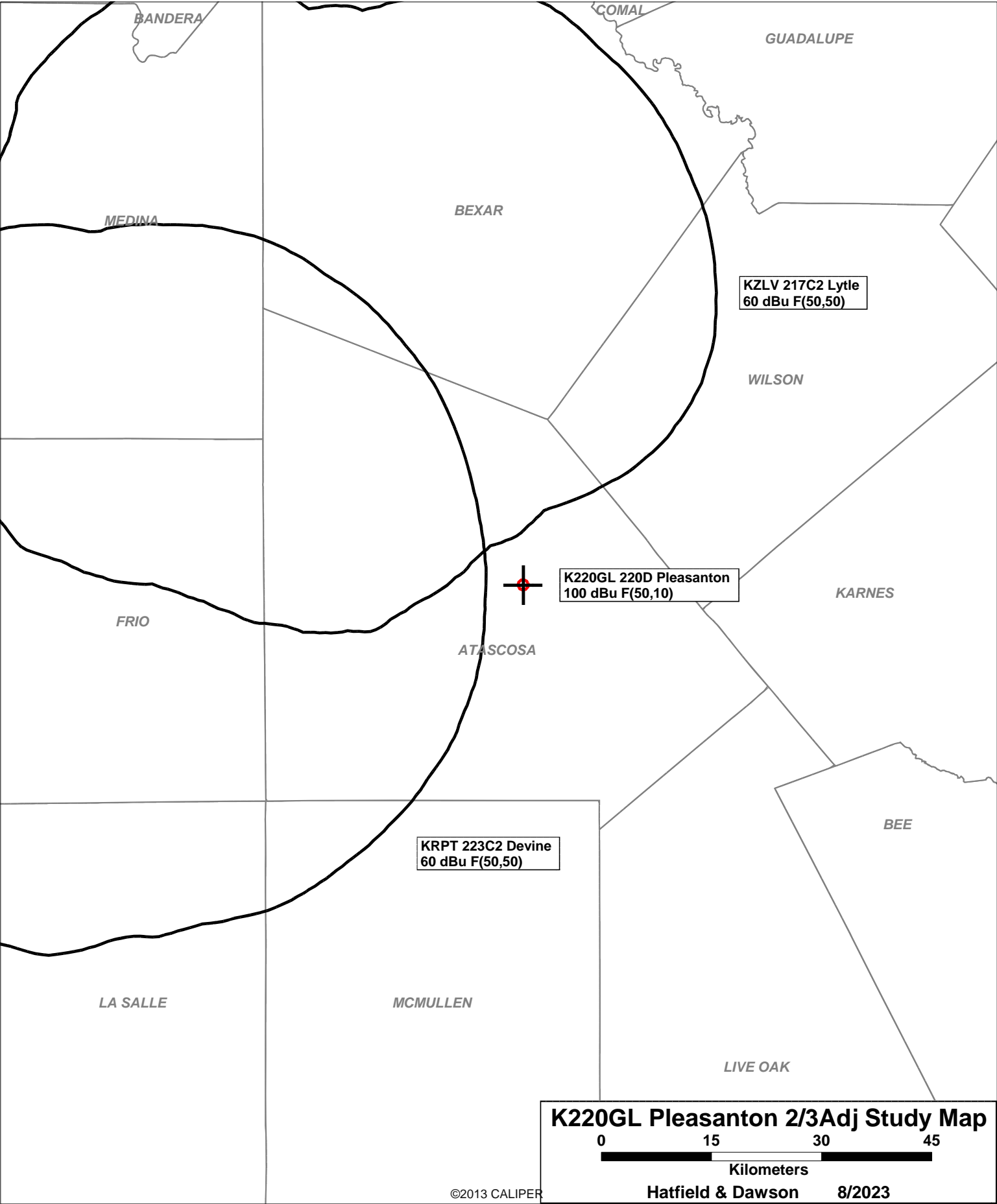
Job Title: K220GL ASR 1050418

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
K221GF LIC	SAN ANTONIO TX	BLFT-20161209AAU	221D 92.1	0.029 0.0	DA 29 25 5.8 98 29 32.1	355.0	56.33 0.00	0 TRANS
KNBT LIC	NEW BRAUNFELS TX	BLH-20030501AAZ	221A 92.1	6.000 95.0	DA 29 43 50.8 98 7 13.0	18.8 SS	95.96 23.96	72 CLEAR
K223CT CP	SAN ANTONIO TX	0000144364	223D 92.5	0.250 0.0	DA 29 25 46.3 98 29 24.2	355.3	57.55 0.00	0 TRANS
KRPT LIC	DEVINE TX	BLH-19981026KD	223C2 92.5	50.000 150.0	28 55 32.9 99 2 54.1	271.6	59.20 4.20	55 CLOSE
K223CT LIC	SAN ANTONIO TX	BLFT-20170912AAM	223D 92.5	0.250 0.0	DA 29 17 24.9 98 15 21.0	23.2	45.65 0.00	0 TRANS
KJXK LIC	SAN ANTONIO TX	BMLH-20070814ABA	274C1 102.7	100.000 202.0	29 25 6.8 98 29 2.1	355.8	56.29 34.29	22 CLEAR

===== END OF FM SPACING STUDY FOR CHANNEL 220 =====







**August 2023
FM Translator K220GL
Pleasanton, TX Channel 220D
RF Exposure Study**

Facilities Proposed

The proposed operation will be on Channel 220D (91.9 MHz) with an effective radiated power of 100 watts. Operation is proposed with an antenna to be mounted on an existing tower with FCC Antenna Structure Registration Number 1050418.

RF Exposure Calculations

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(\mu W / cm^2) = \frac{33.4 \times AdjERP(Watts)}{D^2}$$

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

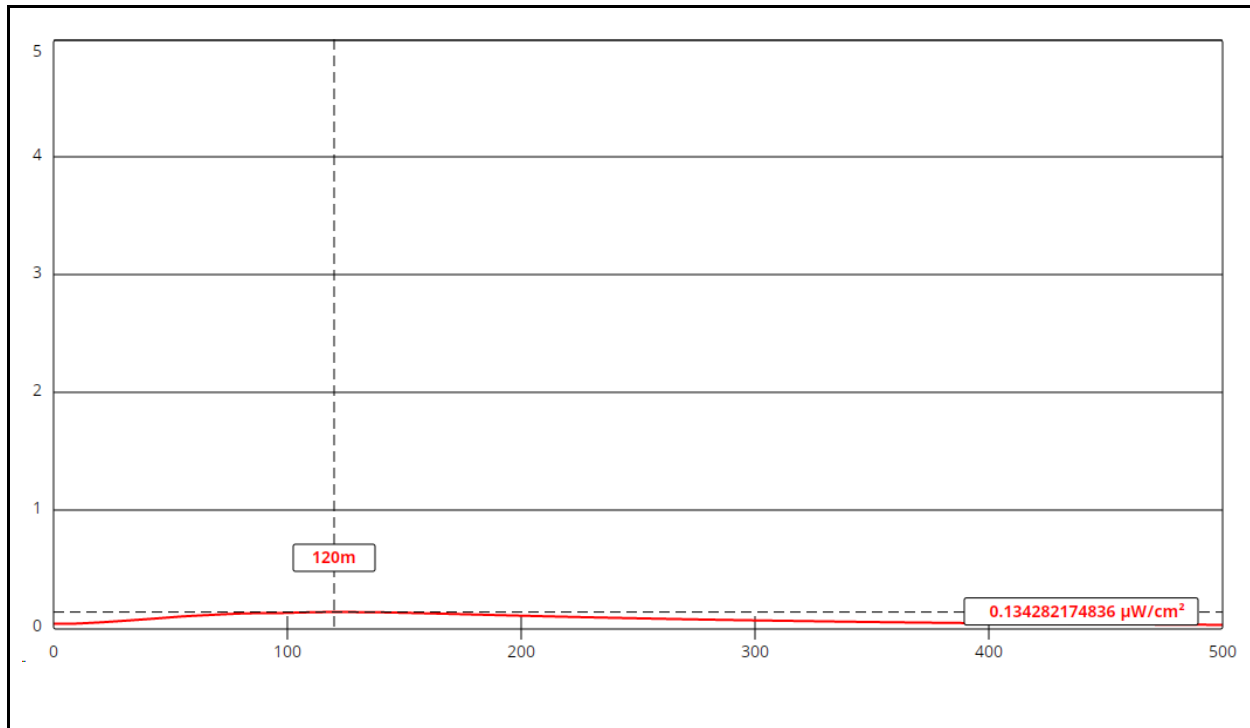
D is the distance in meters from the center of radiation to the calculation point.

Ground level power densities have been calculated for locations extending from the base of the tower to a distance of 500 meters. Values past this point are increasingly negligible.

Calculations of the power density produced by the proposed antenna system assume a Type 2 element pattern, which is the element pattern for the Bext TFC2K-1 antenna proposed for use. The highest calculated ground level power density occurs at a distance of 120 meters from the base of the antenna support structure. At this point the power density is calculated to be 0.1 $\mu W/cm^2$, which is 0.05% of 200 $\mu W/cm^2$ (the FCC standard for uncontrolled environments).

These calculations show that the maximum calculated power density produced at two meters above ground level by the proposed operation of K220GL alone is less than 5% of the applicable FCC exposure limit at all locations between 1 and 500 meters from the base of the antenna support structure. Section 1.1307 of the Commission's Rules exempts applications for new facilities or modifications to existing facilities from the requirement of preparing an environmental assessment when the calculated emissions from the applicants proposed facility are predicted to be less than 5% of the applicable FCC exposure limit. Therefore, the proposed facility is in compliance with Section 1.1301 *et seq* and no further analysis of RF exposure at this site is required in this application.

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.



Ground-Level RF Exposure

OET FMModel

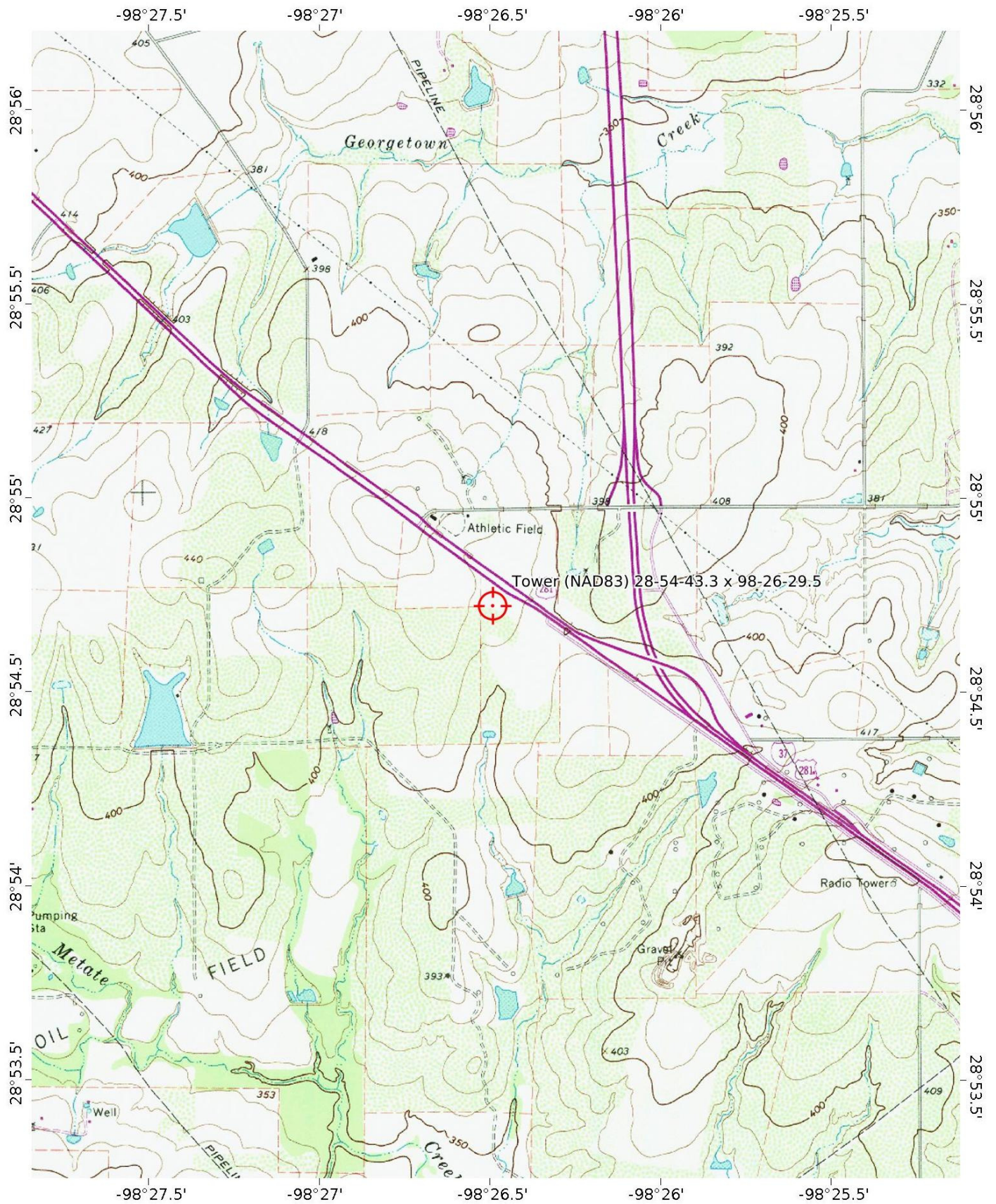
K220GL Pleasanton

Antenna Type: Bext TFC2K-1
 No. of Elements: 1
 Element Spacing: 1.0 wavelength

Distance: 500 meters
 Horizontal ERP: 100 W
 Vertical ERP: 100 W

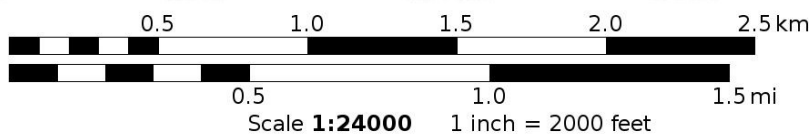
Antenna Height: 119 meters AGL

Maximum Calculated Power Density is 0.1 $\mu\text{W}/\text{cm}^2$ at 120 meters from the antenna structure.



Mercator Projection

WGS84
UTM Zone 14R



MN
3.6°

Hatfield & Dawson Consulting Engineers

