



ENGINEERING STUDY

FCC 349 –LONG FORM APPLICATION

NEW Translator for KUBC (AM), Montrose, CO

BNPFT-20180129AHV

TECHNICAL STATEMENT

This technical statement and attached exhibits were prepared on behalf of CCR-Montrose IV, LLC, licensee of AM radio station KUBC, 580 kHz, Montrose, CO. Facility ID #73626. This application seeks to allocate and license a new FM translator for use as a fill-in service for the above referenced station. This application is being filed pursuant to the major change window Auction 100: AM Revitalization/ FM Translators (DA FCC-17-1168). The application (BNPFT-20180129AHV) was released on the Singleton list subject to the May 9th, 2018 filing deadline. The assigned facility number for this allotment is 202972.

Facilities Proposed

Location (NAD27)	38° 25' 27" N Latitude, 107° 52' 57.8" W Longitude
Location (NAD83)	38° 25' 27" N Latitude, 107° 53' 00" W Longitude
Channel	283D (104.5MHz)
Tower Overall AGL Height-	95m
Tower ASR	1063913
Proposed Antenna	ERI 100A
Antenna AGL Height-	93m
Site AMSL Height-	1811m
ERP	250Watts- NON-DIRECTIONAL

COMPLIANCE WITH 74.1204(a) [contour overlap]

The proposed translator on channel 283D will be fully compliant with 74.1204(a). A table showing the allocation is attached as Exhibit A. A map showing the relationship to the closest co-channel or first adjacent channel allotment (KMXV 282C0) is shown in Exhibit B. Note that this request is two channels removed from the original frequency (281D). Because this application is within 3 channels of the original frequency and is at the same location it is consistent with the rules governing a minor change application.

COMPLIANCE WITH 74.1204(d)

There will be contour overlap with one second adjacent facility, KRYD, 285C1. Exhibit C is a tabulation showing that the interfering contour will not be closer than 39 meters to ground level. Based upon the preceding analysis, it is considered that the proposed operation of 283D will be compliant with 74.1204(d) in that no actual interference will occur to any listeners.

COMPLIANCE WITH 74.1201(g) [AM fill-in]

Exhibit D demonstrates that the proposed translator will be entirely contained within the KUBC (AM) 2mV/m day contour as well as within 25 miles from KUBC.

The proposed facility is not within 320km of the common border between the US and Mexico or Canada.

ENVIRONMENTAL EXHIBIT

The proposed translator facility will utilize a non-directional antenna and will be isocoupled to an existing AM tower (ASR 1063913, Exhibit E) used by the primary station, KUBC. The attachment of the proposed translator antenna will not alter the existing tower structure for purposes of the Nationwide Programmatic Agreement and the NHPA Section 106.

Using the FCC program “FM Model for Windows”, it was calculated that the proposed antenna contributes approximately $0.45\mu\text{W}/\text{cm}^2$ or 0.23 % of the total allowable $200\mu\text{W}/\text{cm}^2$. The maximum was found to be 91 meters from the base of the tower. There are no tall buildings within 100m of the proposed tower, and the tower is fenced preventing public access for KUBC’s RFR compliance requirements.

Other than KUBC (AM) there are no other non-excluded facilities at this site. Because the maximum contribution of the proposed translator for the uncontrolled environment is less than the $10\mu\text{W}/\text{cm}^2$ (5.0%) limit as set forth by §1.1307(b)(3), the facility will be in compliance with FCC guidelines and is excluded from further Environmental Assessment under 47CFR 1.1306 and 1.1307.

The proposed new FM translator along with other users at the site will maintain an occupational safety policy and agrees to reduce power or cease operation during periods of maintenance to avoid potentially harmful exposure of personnel to non-ionizing RF radiation.

Respectfully Submitted

A handwritten signature in cursive script that reads "Bert Goldman". The signature is written in black ink and is positioned above the printed name.

Bert Goldman

Technical Consultant

EXHIBIT A- ALLOCATION STUDY

ComStudy 2.2 search of channel 283 (104.5 MHz Class D) at 38-25-27.0 N, 107-52-57.8 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
NEW	MONTROSE	CO 281 D	0.00	0.00	90.0	-40.90 dB SHORT-FORM
KRYD	NORWOOD	CO 285 C1	30.09	0.00	246.6	-19.25 dB EXHIBIT D
KMXY	GRAND JUNCTION	CO 282 C0	103.56	0.00	313.8	1.18 dB
KKFG	BLOOMFIELD	NM 283 C	197.94	0.00	177.4	22.02 dB
K284AP	GRAND JUNCTION	CO 284 D	103.53	0.00	313.9	26.12 dB
KMXY	GRAND JUNCTION	CO 282 C0	92.08	0.00	321.3	27.73 dB
KKFG	BLOOMFIELD	NM 283 C	197.62	0.00	188.6	31.38 dB
KKVM	VAIL	CO 284 C1	183.11	0.00	42.2	33.23 dB
K282BJ	CARBONDALE	CO 282 D	119.30	0.00	21.4	34.73 dB
KKFG	BLOOMFIELD	NM 283 C	190.46	0.00	182.7	36.97 dB
K283BN	VERNAL	UT 283 D	281.94	0.00	327.0	37.89 dB

CDBS AS OF 5/7/2018

EXHIBIT C 74.1204(a) Compliance

Proposed KUBC 283D from ASR 1063913, 250w ND, 93m AGL 74.1204a Compliance

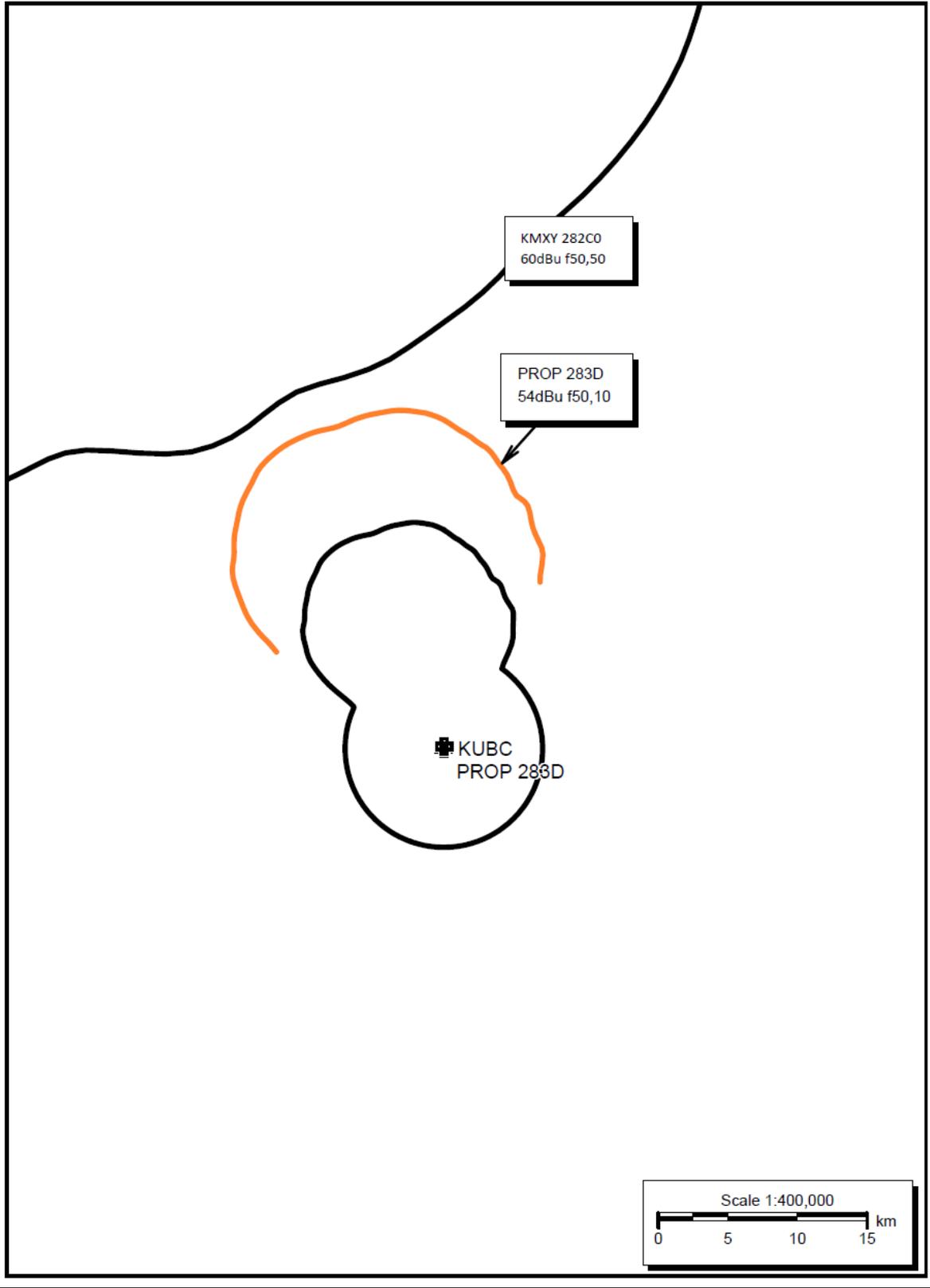


EXHIBIT D 74.1204(d) Compliance to KRYD

1777616 Montrose , CO, Showing Protection to KRYD

Geographic Coordinates: N.38 25 27.0 W.107 72 58.0

74.1204(d) Study - Using NED 03 SEC Terrain Database

Translator or LPFM Maximum Licensed ERP = 0.25

Translator or LPFM Antenna Height AG = 93 Meters

1777616 Antenna Model = LPX1E

Protected Station's Contour = 78.54805 dBu

Translator's or LPFM's full Interference contour 118.54805

Review Azimuth = 0 Degrees True

Relative Field on the horizon at Review Azimuth = 1.000

Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW

Distance between stations = 30.0 km

Protected Station= KRYD, 24 kW, 3074 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	131.0894	131.0894	093.000
05.00	0.993	1.0	0.2465	130.1717	129.6764	081.655
10.00	0.974	1.0	0.2372	127.6811	125.7413	070.828
15.00	0.941	1.0	0.2214	123.3551	119.1519	061.073
20.00	0.897	1.0	0.2012	117.5872	110.4958	052.783
25.00	0.843	1.0	0.1777	110.5083	100.1546	046.297
30.00	0.78	1.0	0.1521	102.2497	088.5508	041.875
35.00	0.709	1.0	0.1257	092.9424	076.1339	039.690
40.00	0.633	1.0	0.1002	082.9796	063.5660	039.662
45.00	0.554	1.0	0.0767	072.6235	051.3526	041.647
50.00	0.473	1.0	0.0559	062.0053	039.8562	045.501
55.00	0.394	1.0	0.0388	051.6492	029.6248	050.691
60.00	0.317	1.0	0.0251	041.5553	020.7777	057.012
65.00	0.245	1.0	0.0150	032.1169	013.5732	063.892
70.00	0.181	1.0	0.0082	023.7272	008.1152	070.704
75.00	0.124	1.0	0.0038	016.2551	004.2071	077.299
80.00	0.077	1.0	0.0015	010.0939	001.7528	083.059
85.00	0.041	1.0	0.0004	005.3747	000.4684	087.646
90.00	0.016	1.0	0.0001	002.0974	000.0000	090.903

EXHIBIT E 74.1201(g) Compliance

Proposed KUBC 283D from ASR 1063913, 250w ND, 93m AGL 74.1201g Compliance

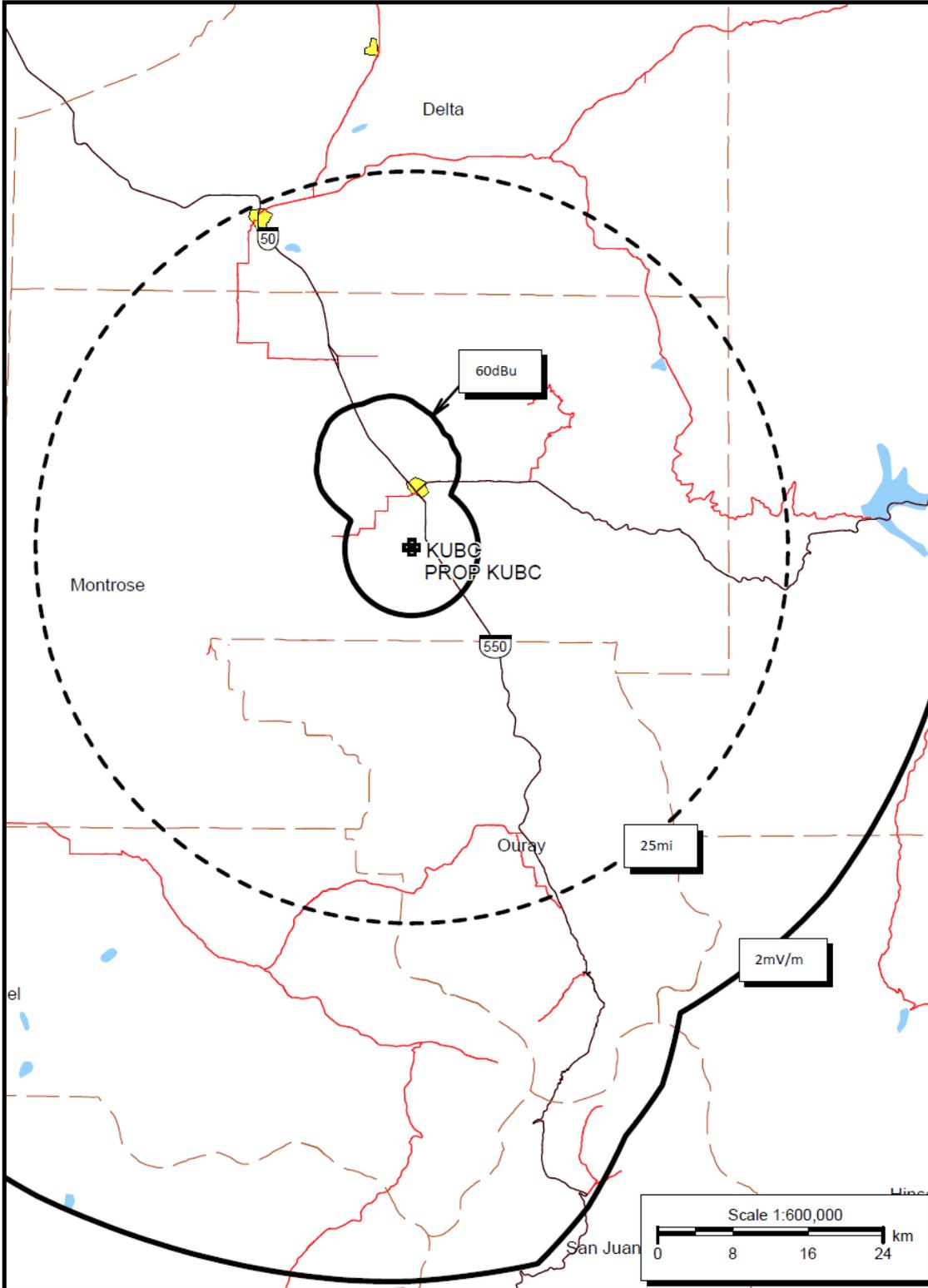


EXHIBIT G- NADCON CONVERSION

Output from NADCON for station

North American Datum Conversion

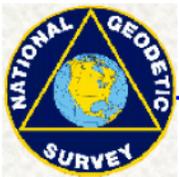
NAD 83 to NAD 27

NADCON Program Version 2.11

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Transformation #: 1 Region: Conus

	Latitude	Longitude
NAD 27 datum values:	38 25 27.04654	107 52 57.77355
NAD 83 datum values:	38 25 27.00000	107 53 0.00000
NAD 27 - NAD 83 shift values:	0.04655	-2.22645(secs.)
	1.435	-54.006 (meters)
Magnitude of total shift:		54.025(meters)



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