

**TECHNICAL EXHIBIT**

APPLICATION FOR A  
NONCOMMERCIAL EDUCATIONAL  
BROADCAST STATION

PARK CITY, UTAH  
CH 220A 6,000 WATTS -12 M

NOVEMBER 27, 2013

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## Technical Narrative

This engineering report has been prepared on behalf of Community Wireless of Park City, Inc., in support of an application for a minor change in a non-commercial educational class station.

It is believed that this proposal conforms to all applicable rules and regulations of the FCC.

## Proposed Station Data

Frequency: 91.9 MHz.

Channel: 220

ERP: 6,000 watts

Class: A

## Proposed Antenna Location

The geographic coordinates (NAD 27) of the proposed site are as follows:

North Latitude: 40-40-59

West Longitude: 111-31-20

Figure 1 shows the proposed station on a USGS quadrangle map, indicating the altitude above ground level to be 7380 feet or 2250 meters at proposed coordinates.

## Transmitting Antenna

ANTENNA: Directional, circularly polarized, two-bay.

### Community Coverage

This application complies with 47 CFR § 73.515 in that the proposed station will cover 100% of the principal community with a 60 dBu signal or better, as illustrated in Figure 2.

### Contour Overlap

This application complies with 47 CFR § 73.509 in that the proposed station does not overlap the pertinent contours of any first, second, third adjacent channel stations, as shown in Table 1 and Figures 3 and 4.

### Spacing Requirements

This application complies with 47 CFR § 73.207 in that proposed station is properly spaced with any pertinent first, second, third adjacent and IF channels, as shown in Table 1, with the exception of KTCE.

Figure 4 shows that no prohibited contour overlap occurs between the proposed station and KTCE, and that short-spacing is permitted under 47 CFR § 73.215.

### International Borders

The proposed antenna location is 841.4 kilometers from the common border between the United States and Mexico, and is in compliance with international agreements.

## Environmental Considerations

The station will operate with an effective radiated power of 6,000 watts into a directional, circularly polarized antenna.

The Shively 6813-2 directional antenna will consist of two-bays spaced at  $\frac{1}{2}$  wavelength at a center of radiation 16 meters above ground level.

Figure 5 shows the predicted power density versus distance emitted by the proposed facility. This figure is based on the parameters of proposed station KPCW-FM, using the FCC FM Model computer program.

The proposed power density at the base of the tower is calculated to be  $0.1725 \text{ mW/cm}^2$ , which is 86 percent of the recommended limit of  $0.2 \text{ mW/cm}^2$  for all FM channels applicable to general population/uncontrolled exposure areas.

Access to the transmitting site is restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radio-frequency radiation will not exceed the FCC guidelines.

Callsign	State	City	Freq	Channel	ERP_w	Class	Status	Distance_km	Sep	Clr
KTCE	UT	PAYSON	92.1	221	125	A	LIC	70.65	72	-1.3
KUUU	UT	SOUTH JORDAN	92.5	223	500	C2	LIC	57.46	55	2.5
KOHS	UT	OREM	91.7	219	1750	A	LIC	45.48	72	3.97 dB
NEW	UT	OREM	91.7	219	100	A	APP	43.74	72	5.98 dB
KEYP	UT	PRICE	91.9	220	100	A	LIC	134.73	115	8.87 dB
KUFR	UT	SALT LAKE CITY	91.7	219	220	A	LIC	32.24	72	10.10 dB
KEYV	UT	VERNAL	91.7	219	910	C3	LIC	155.13	89	16.40 dB
KUSU-FM	UT	LOGAN	91.5	218	90000	C	LIC	141.34	95	24.06 dB
KTYN	WY	THAYNE	91.9	220	77	A	LIC	271.05	115	27.71 dB
KSL-FM	UT	MIDVALE	102.7	274	25000	C	LIC	57.49	29	28.5
KFRZ	WY	GREEN RIVER	92.1	221	0	C	USE	196.33	165	31.3
KBWE	ID	BURLEY	91.9	220	4900	A	LIC	278.91	115	32.31 dB
KEYR	UT	RICHFIELD	91.7	219	850	C1	LIC	264.41	133	35.78 dB
KFRZ	WY	GREEN RIVER	92.1	221	90000	C	LIC	203.98	165	39

TABLE 1: Pertinent first, second, third adjacent, and IF channel stations spaced with proposed station.

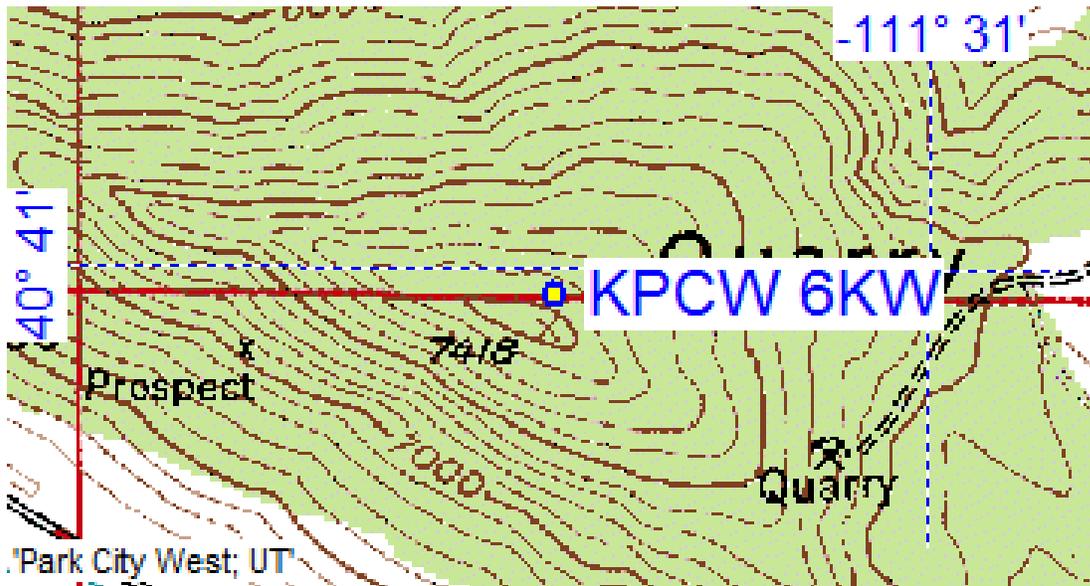


FIGURE 1: Ground elevation of 7380 feet or 2250 meters at proposed coordinates, determined using a USGS quadrangle.

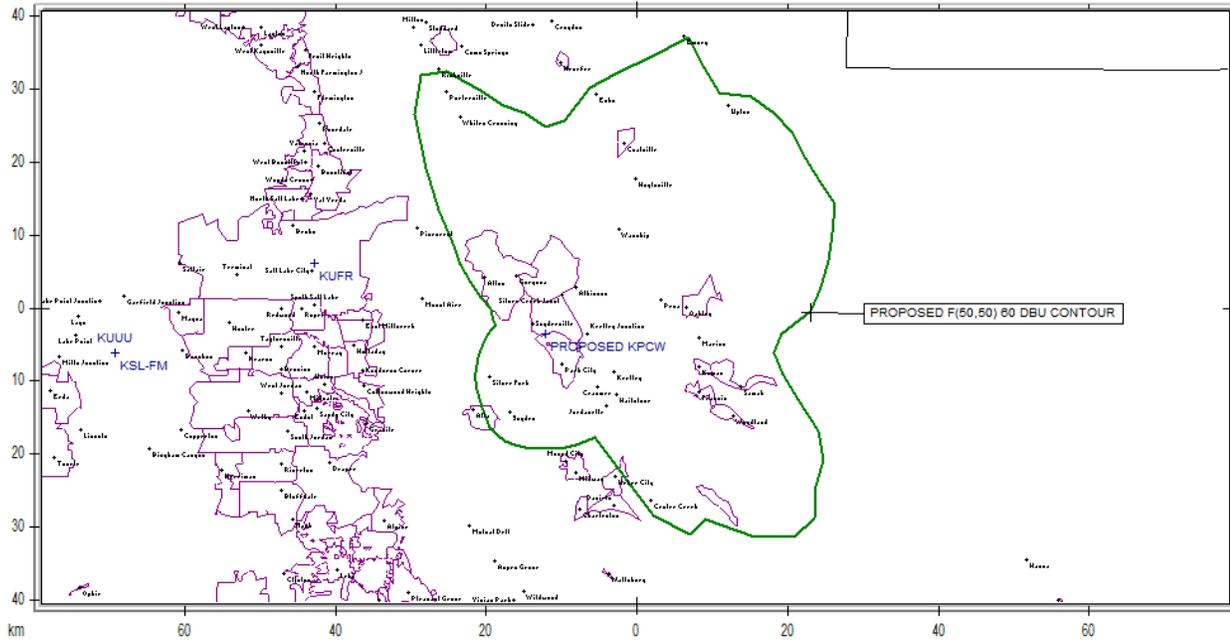


FIGURE 2: 60 dBU F(50,50) contour of the proposed station.

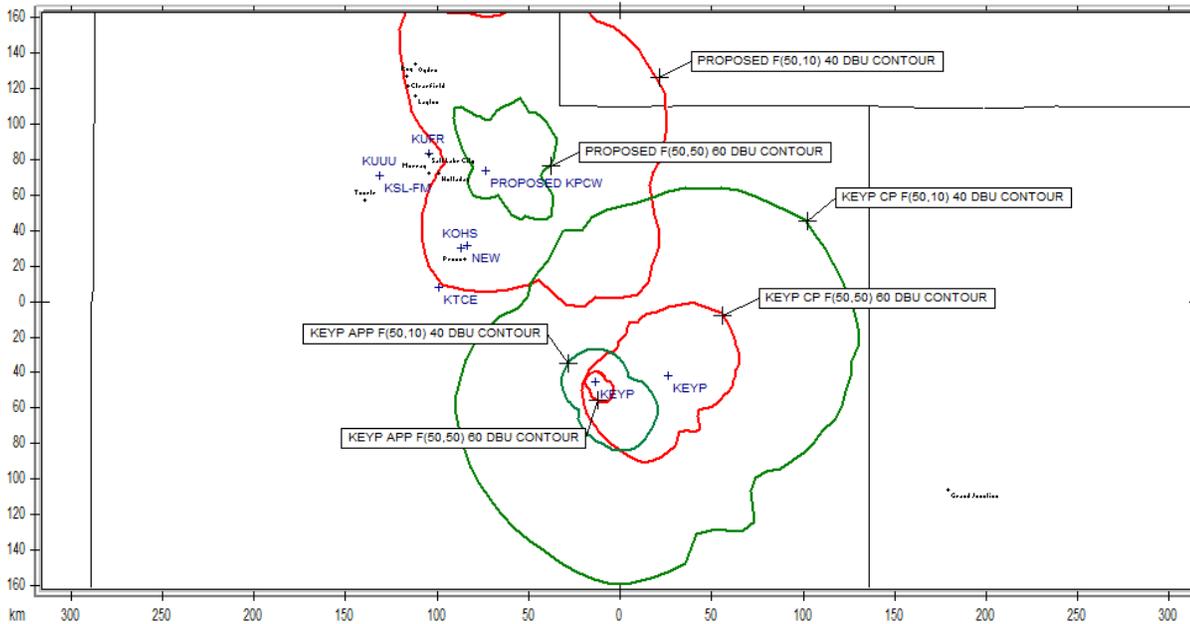


FIGURE 3: Pertinent contours of the proposed station and co-channel stations.

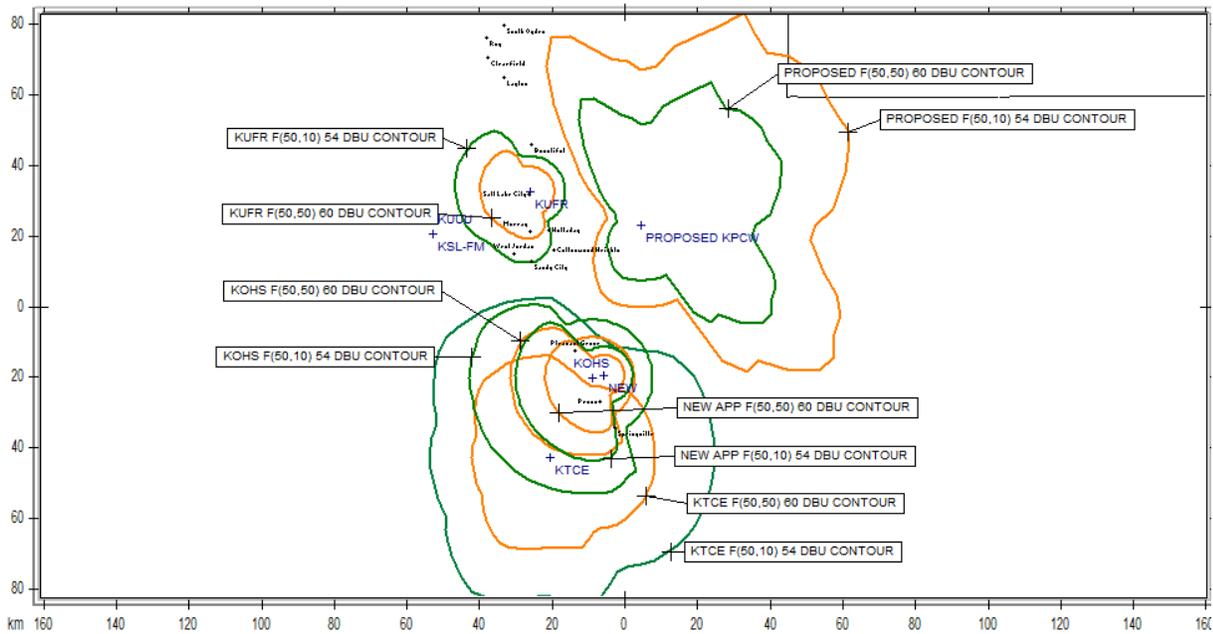


FIGURE 4: Pertinent contours of the proposed station and first adjacent channel stations.

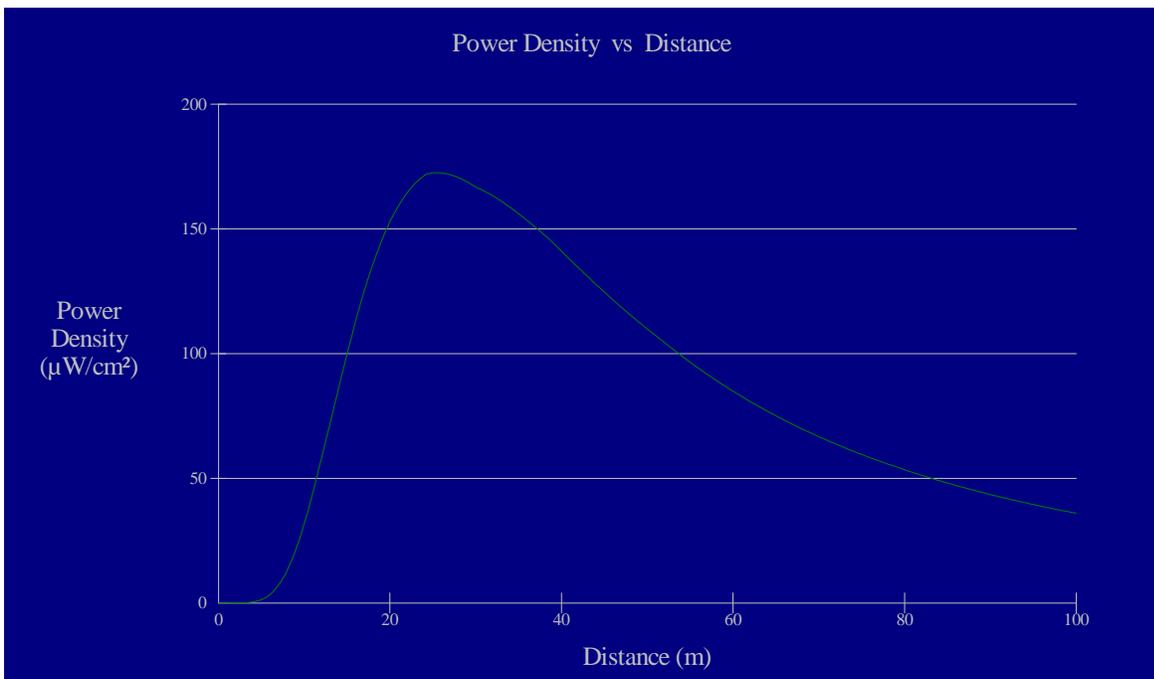


FIGURE 5: Power density vs. distance for proposed station.

In accordance with the laws of the State of Utah, this application is affixed with the seal of Mario Hieb, P.E.

