

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
FM BOOSTER  
RADIO STATION KPEB (FM)  
PARK CITY, UTAH

MARCH 31, 2004

CH 276 3 KW (MAX-DA)

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
FM BOOSTER  
RADIO STATION KPEB (FM)  
PARK CITY, UTAH  
CH 276 3 KW (MAX-DA)

Table of Contents

	Technical Narrative
Figure 1	Proposed Transmitter Location
Figure 2	Proposed Antenna and Supporting Structure
Figure 3	Map Showing Predicted Coverage Contours
Appendix	

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
FM BOOSTER  
RADIO STATION KPEB(FM)  
PARK CITY, UTAH  
CH 276 3 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for a new FM booster at Park City, Utah. The primary station is KPEB(FM) on Channel 276C assigned to Coalville, Utah.

Proposed Transmitter Location

The location is uniquely described by the following geographic coordinates:

40° 51' 18" North Latitude  
111° 28' 47" West Longitude

A map showing the transmitter location is included herein as Figure 1. A sketch showing the proposed antenna and supporting structure is shown on Figure 2.

Coverage Contours

Figure 3 is a map showing the proposed booster station's 60 dBu (1.0 mV/m) coverage contour encompassed by the primary station's (KPEB(FM), Channel 276C, Coalville, Utah) 60 dBu protected contour.<sup>1</sup>

---

<sup>1</sup> The KPEB(FM) authorized facility, BMPH-20040204ABK, is used to define the primary station.

The appendix contains the information on the proposed Jampro directional antenna. Also proposed in the Appendix is a certification from the proposed antenna manufacturer that the new antenna will not affect the other antennas located on the tower is provided.

#### Allocation Study

The proposed booster facility appears to satisfy the protection requirements toward first adjacent channel stations as required by Section 74.1204(i) of the Commission's Rules as to all facilities.

#### Radiofrequency Electromagnetic Field Exposure

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields."<sup>2</sup> The proposed calculated power density at the base of the tower was calculated using the appropriate equation on Page 23 of the Bulletin.

Using a total effective radiated power of 3 kilowatt and a reasonable assumed downward relative field value of 0.3, the predicted power density at ground level located 34 meters (110 feet) below the antenna radiation center is 0.009 mW/cm<sup>2</sup>. This is less than 5 percent of the Commission's guideline in an uncontrolled environment for a FM radio station.<sup>3</sup>

---

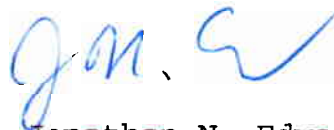
<sup>2</sup> OET Bulletin 65, Second Edition 97-01, August, 1997.

<sup>3</sup> The FCC maximum guideline for an FM broadcast radio station in an uncontrolled environment is 0.2 mW/cm<sup>2</sup>.

Pursuant to Section 1.1307(b) of the Commission's Rules, the power density contributions of co-located and nearby broadcast stations are not required to be calculated as the proposed translator's power density contribution is less than five percent of the guideline value.

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 radiofrequency electromagnetic fields will not exceed the FCC guidelines.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.



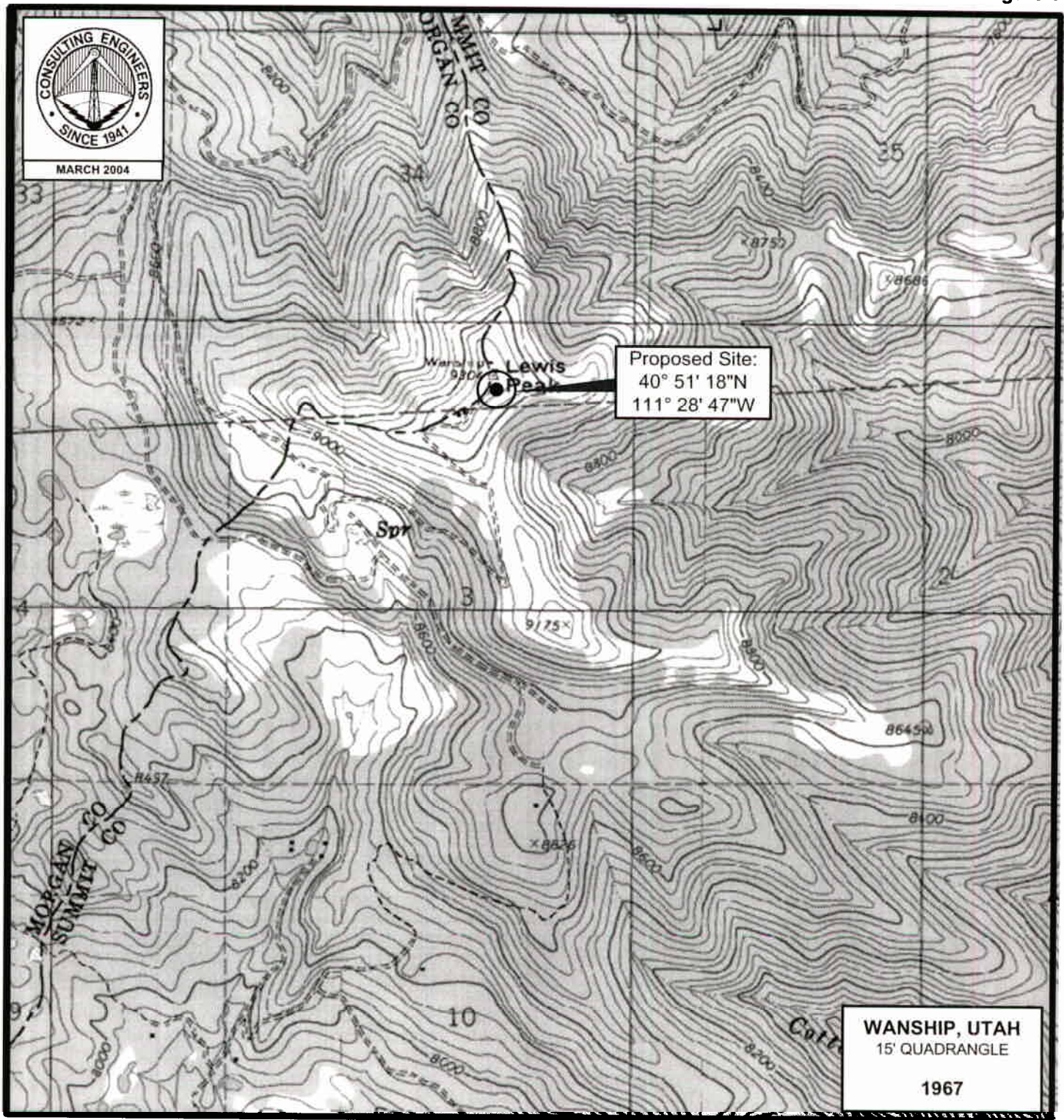
Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
941.329.6000

March 31, 2004



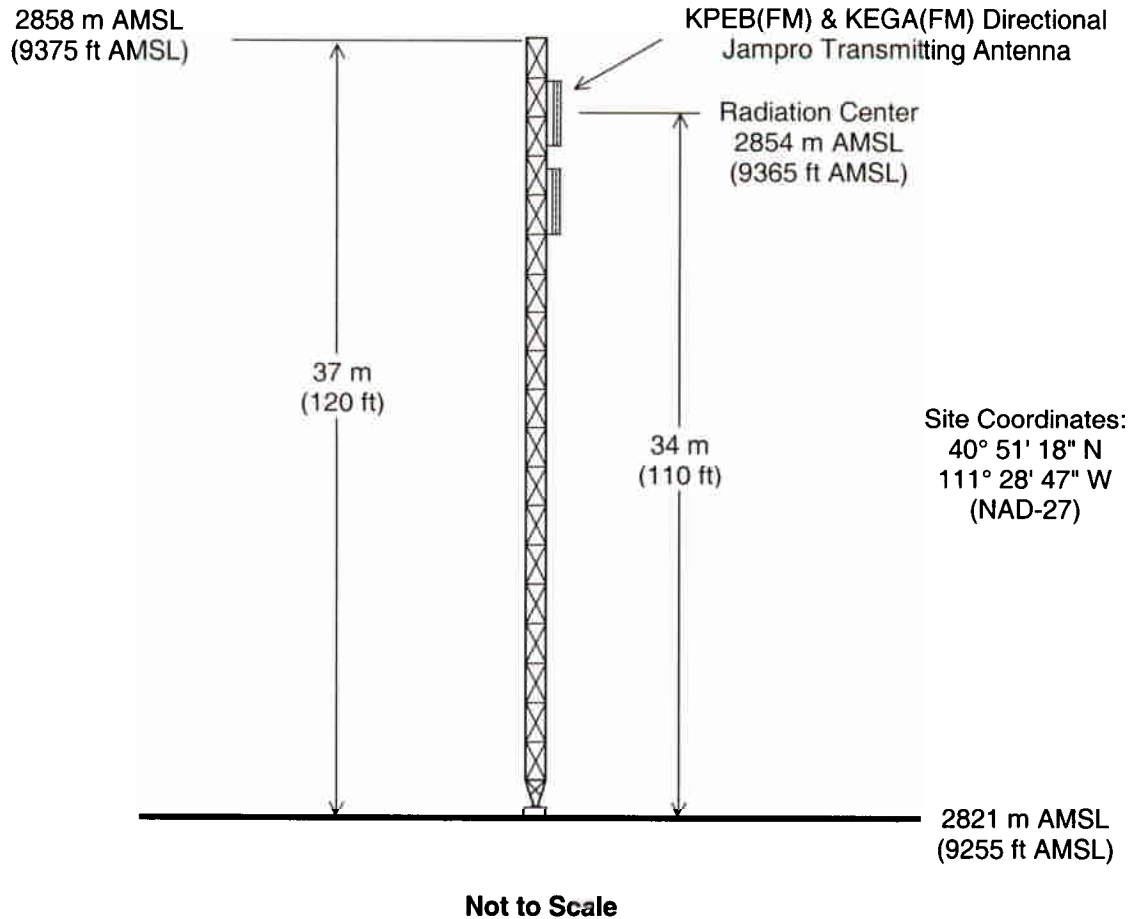
Figure 1



## **PROPOSED TRANSMITTER SITE**

**RADIO STATION KPEB(FM) BOOSTER  
PARK CITY, UTAH  
CH 276 3 KW (MAX-DA)**

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



## **PROPOSED ANTENNA AND SUPPORTING STRUCTURE**

**RADIO STATION KPEB(FM) BOOSTER**

**PARK CITY, UTAH**

**CH 276 3 KW (MAX-DA)**

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

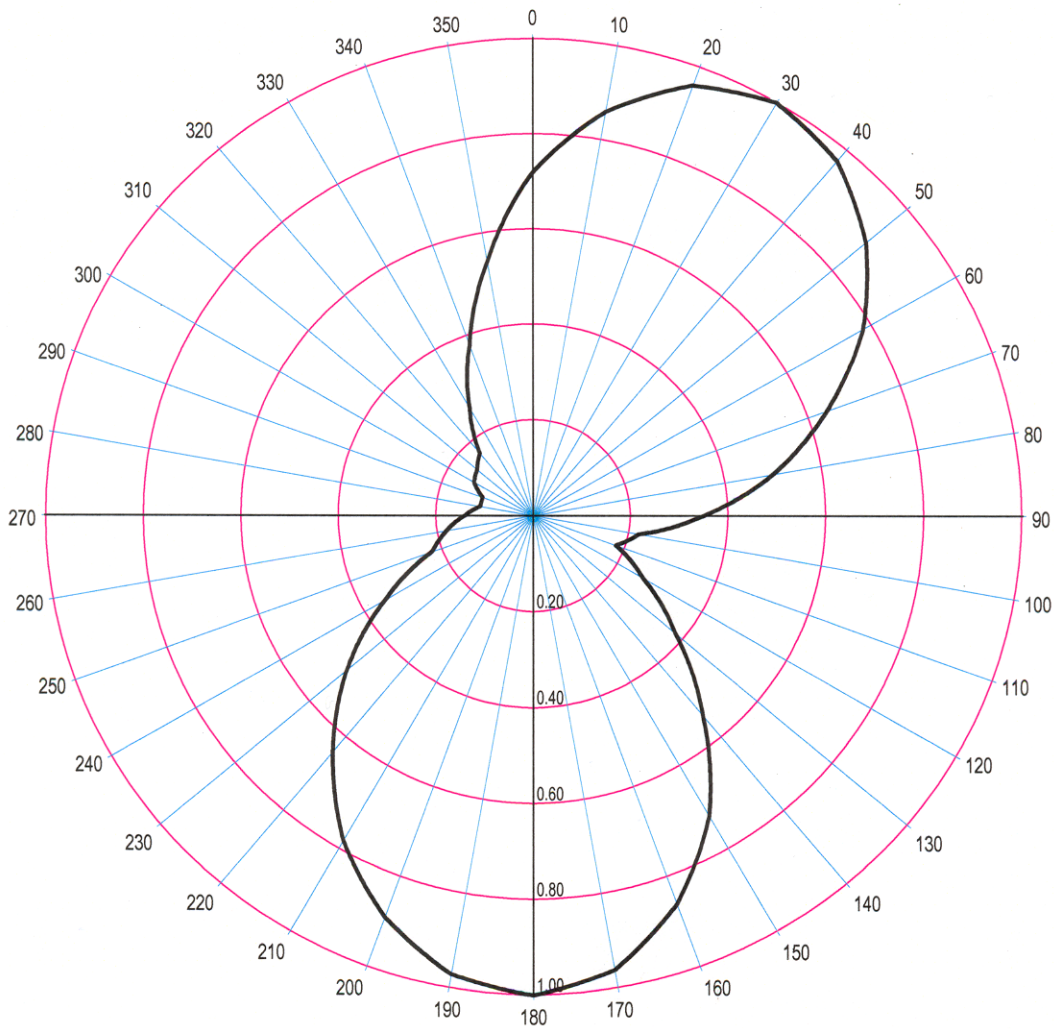
Figure 3





## APPENDIX A

### MANUFACTURER DIRECTIONAL ANTENNA SPECIFICATIONS



Azim	Rel.FS	ERP [kW]	dBk	Azim	Rel.FS	ERP [kW]	dBk	Azim	Rel.FS	ERP [kW]	dBk	Azim	Rel.FS	ERP [kW]	dBk
0.0	0.720	1.141	0.571	90.0	0.350	0.270	-5.694	180.0	1.000	2.200	3.424	270.0	0.140	0.043	-13.653
5.0	0.790	1.373	1.377	95.0	0.285	0.179	-7.479	185.0	0.985	2.135	3.293	275.0	0.125	0.034	-14.637
10.0	0.860	1.627	2.114	100.0	0.220	0.106	-9.727	190.0	0.970	2.070	3.160	280.0	0.110	0.027	-15.748
15.0	0.910	1.822	2.605	105.0	0.200	0.088	-10.555	195.0	0.930	1.903	2.794	285.0	0.110	0.027	-15.748
20.0	0.960	2.028	3.070	110.0	0.180	0.071	-11.470	200.0	0.890	1.743	2.412	290.0	0.110	0.027	-15.748
25.0	0.980	2.113	3.249	115.0	0.220	0.106	-9.727	205.0	0.835	1.534	1.858	295.0	0.125	0.034	-14.637
30.0	1.000	2.200	3.424	120.0	0.260	0.149	-8.276	210.0	0.780	1.339	1.266	300.0	0.140	0.043	-13.653
35.0	0.985	2.135	3.293	125.0	0.320	0.225	-6.473	215.0	0.710	1.109	0.450	305.0	0.145	0.046	-13.348
40.0	0.970	2.070	3.160	130.0	0.380	0.318	-4.980	220.0	0.640	0.901	-0.452	310.0	0.150	0.050	-13.054
45.0	0.930	1.903	2.794	135.0	0.460	0.466	-3.321	225.0	0.570	0.715	-1.458	315.0	0.160	0.056	-12.493
50.0	0.890	1.743	2.412	140.0	0.540	0.642	-1.928	230.0	0.500	0.550	-2.596	320.0	0.170	0.064	-11.967
55.0	0.835	1.534	1.858	145.0	0.630	0.873	-0.589	235.0	0.425	0.397	-4.008	325.0	0.215	0.102	-9.927
60.0	0.780	1.339	1.266	150.0	0.720	1.141	0.571	240.0	0.350	0.270	-5.694	330.0	0.260	0.149	-8.276
65.0	0.710	1.109	0.450	155.0	0.790	1.373	1.377	245.0	0.285	0.179	-7.479	335.0	0.320	0.225	-6.473
70.0	0.640	0.901	-0.452	160.0	0.860	1.627	2.114	250.0	0.220	0.106	-9.727	340.0	0.380	0.318	-4.980
75.0	0.570	0.715	-1.458	165.0	0.910	1.822	2.605	255.0	0.200	0.088	-10.555	345.0	0.460	0.466	-3.321
80.0	0.500	0.550	-2.596	170.0	0.960	2.028	3.070	260.0	0.180	0.071	-11.470	350.0	0.540	0.642	-1.928
85.0	0.425	0.397	-4.008	175.0	0.980	2.113	3.249	265.0	0.160	0.056	-12.493	355.0	0.630	0.873	-0.589

## APPENDIX B

### MANUFACTURER CERTIFICATION OF NON-ADVERSE IMPACT TO OTHER CO-LOCATED ANTENNAS



6340 Sky Creek Dr.  
Sacramento, CA 95826  
Ph: 916-383-1177  
Fx: 916-383-1182

February 17, 2004

Scot Mathews  
Simmons Media Group  
57 West S. Temple, Ste. 700  
Salt Lake City, UT 84101

Re: Lewis Peak

Dear Scot:

We have reviewed the information describing how the Jampro FM JCPD panel antenna (KEGA) will be mounted vertically close to another Jampro FM JCPD panel (KXRK) and a Scala antenna (KZBN). The Scala being mounted on the same tower but lower than the two FM panel antennas should have negligible effects if any on the directional azimuth pattern.

Furthermore, the two JCPD panel antennas should not affect the pattern of either since there is a vertical separation from each other. While we expect negligible effects Jampro cannot warrant or guarantee that such effects might not occur.

In addition, Jampro recommends the use of band pass filters in each transmission system to guarantee there are no spurious emissions being generated from this site.

Regards,

Greg Montano  
Domestic Sales  
Jampro Antennas, Inc.  
[greg@jampro.com](mailto:greg@jampro.com)

**Over 45 Years of putting your signal in its place!**  
**[www.jampro.com](http://www.jampro.com)**