

TECHNICAL EXHIBIT  
MINOR MODIFICATION APPLICATION  
NEW FM STATION (FACILITY ID 170999)  
LOWRY CITY, MISSOURI

JULY 31, 2009

CH 285A 1.1 KW 127 M

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Technical Narrative

This Technical Exhibit was prepared on behalf of a new FM station at Lowry City, Missouri, resulting from FCC Auction 70 (MM-FM554-A). A subsequent "long-form" application was also timely filed (BNPH-20070419AEP).

This modification is intended to modify the transmitter site coordinates, decrease effective radiated power (ERP) and increase antenna height above average terrain (HAAT) for the proposal. FCC Section 73.215 processing is also requested.

Proposed Facilities

This application proposes to construct a Class A facility at the following site coordinates (NAD27): 38-09-08 N, 93-39-43 W (see Figure 1). It is proposed to operate with a non-directional ERP of 1.1 kW and antenna HAAT of 127 meters (less than maximum Class A facilities). A sketch of the proposed structure is shown in Figure 2. The Federal Aviation Administration (FAA) is being notified of the proposed structure. When a *Determination of No Hazard* is issued, the tower will be registered with the FCC.

Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station is predicted to extend radially 0.4 kilometer from the transmitting site. No interference is expected. However, the applicant recognizes its responsibility to resolve complaints of interference, including blanketing and receiver-induced interference as required by Sections 73.315(b), 73.316(e) and 73.318.

### Proposed Coverage Analysis

Figure 3 is a map showing the predicted FCC coverage contours for the proposed operation. The FCC predicted 70 dBu coverage contour will encompass the entire Lowry City limits as derived from 2000 U.S. Census data.

The overall average HAAT (127 meters, rounded to the nearest meter) was determined using the N.G.D.C. 30-second terrain database and 8 evenly spaced radials (every 45 degrees of azimuth).

### Allocation Study

Figure 4 is an allocation study for channel 285A from the proposed allotment reference point coordinates. The allotment reference point meets the FCC's minimum separation requirements, specified in Section 73.207(b) of the Commission's Rules, to all assignments and stations. The allotment reference point is that of ASRN 1012449.

Sheet 1 of Figure 5 is an allocation study for channel 285A from the proposed site. As indicated the proposed site meets the FCC's minimum separation requirements, specified in Section 73.207(b) of the Commission's Rules, to all assignments and stations except to a station KCJK, on channel 286C1 at Garden City, Missouri. There are no other allocation issues.

Processing pursuant to the short-spacing provisions is requested with respect to station KCJK. Station KCJK is being protected using contour overlap procedures (see Figure 5). The protected and interfering contours for KCJK were generated using maximum equivalent Class C1 facilities (100 kW/299 meters).

Radiofrequency Electromagnetic Field Exposure

The proposed FM facility was evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. Based on the FCC's FM Model program using a 4-bay "rototiller" antenna, the calculated power density at a point 2 meters above ground level will not exceed  $0.006 \text{ mW/cm}^2$ , which is less than 5% of the FCC's recommended limit of  $0.2 \text{ mW/cm}^2$  for FM channels, applicable to general population/uncontrolled exposure areas.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the station is at reduced power or shut down. The proposed operation appears to be otherwise categorically excluded from environmental processing.

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.



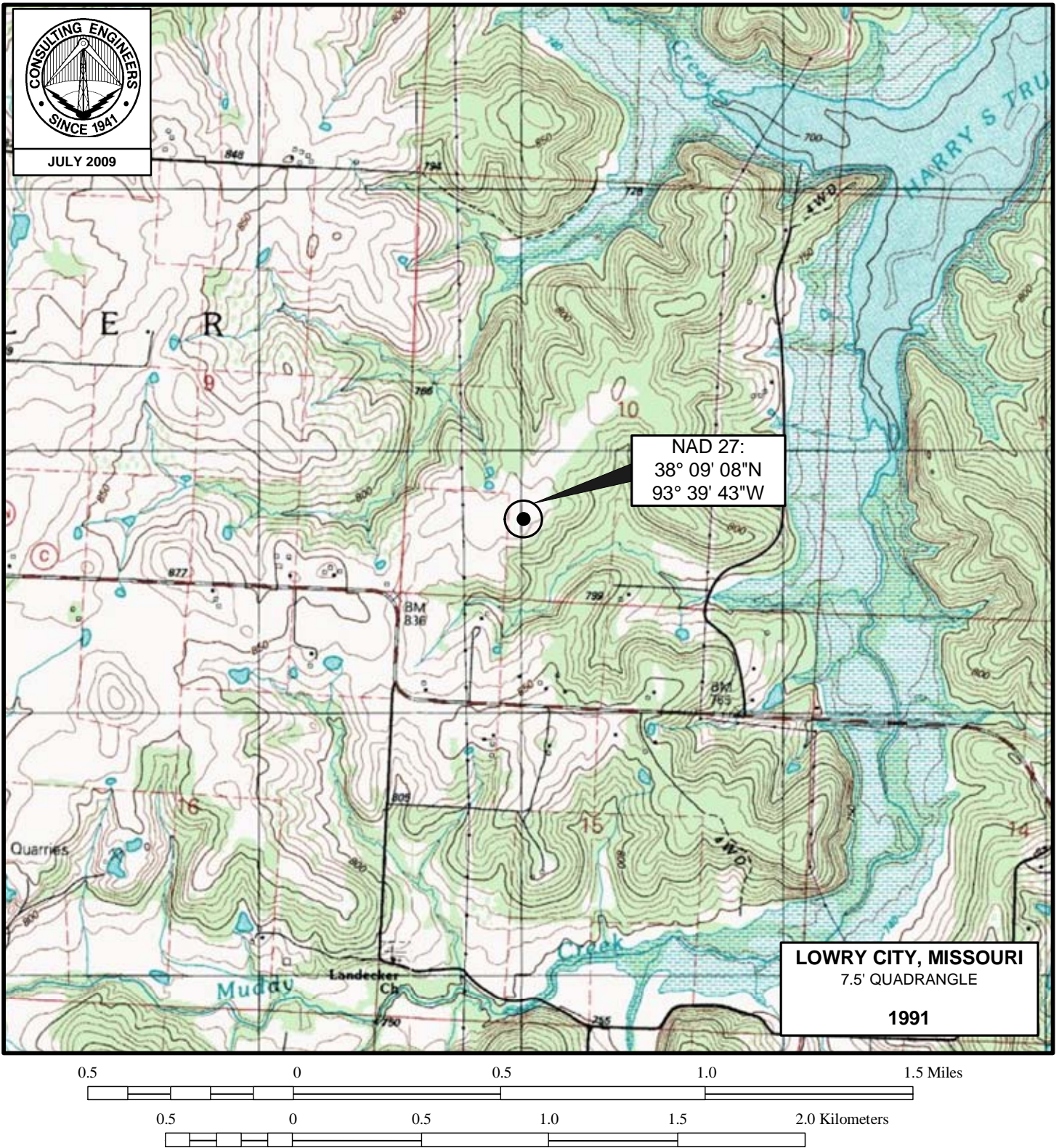
Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941) 329-6000

July 31, 2009



Figure 1



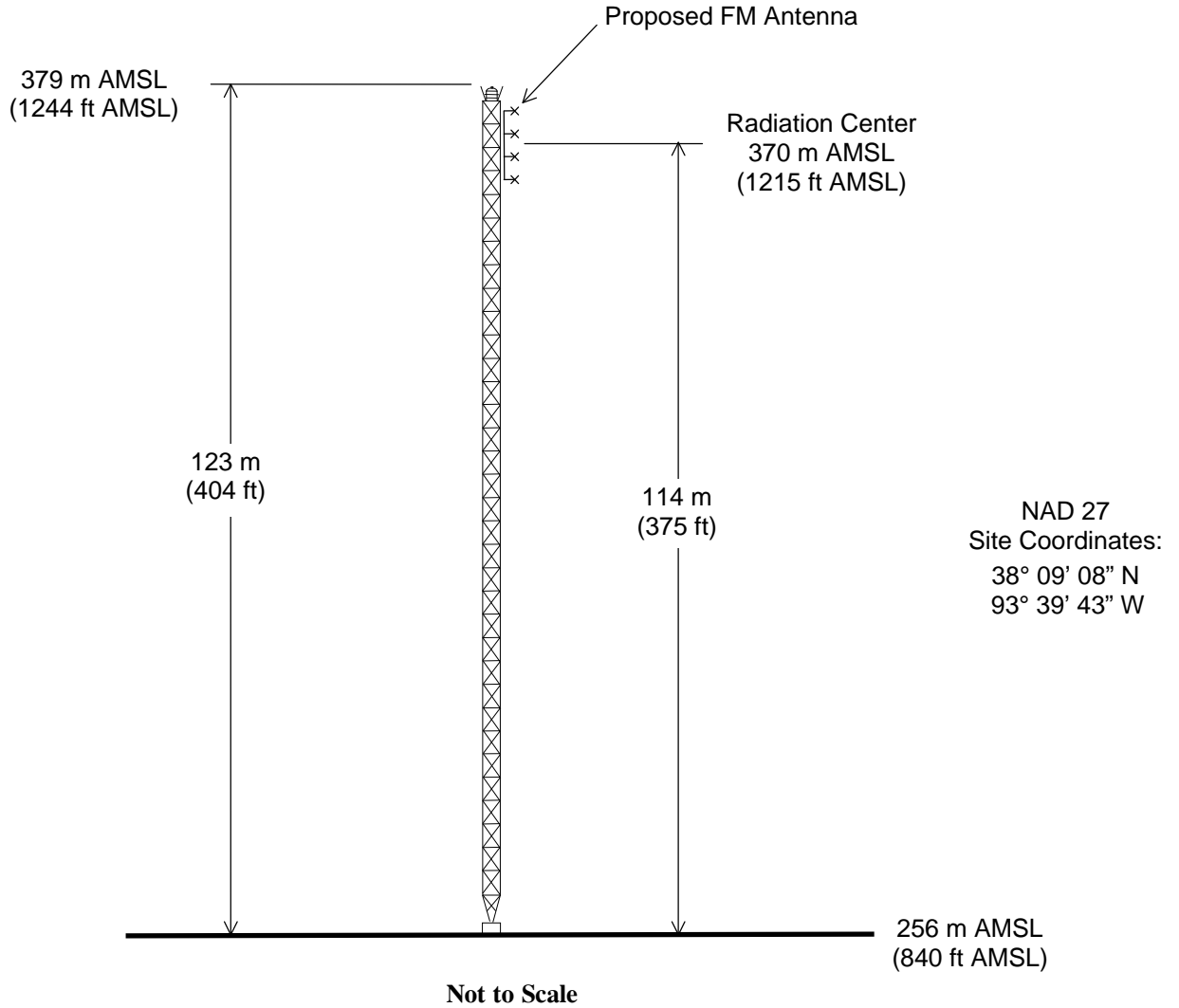
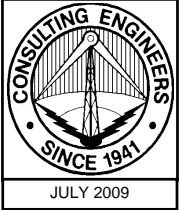
## **PROPOSED TRANSMITTER SITE**

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Figure 2

(FAA being applied for)



## PROPOSED ANTENNA AND SUPPORTING STRUCTURE

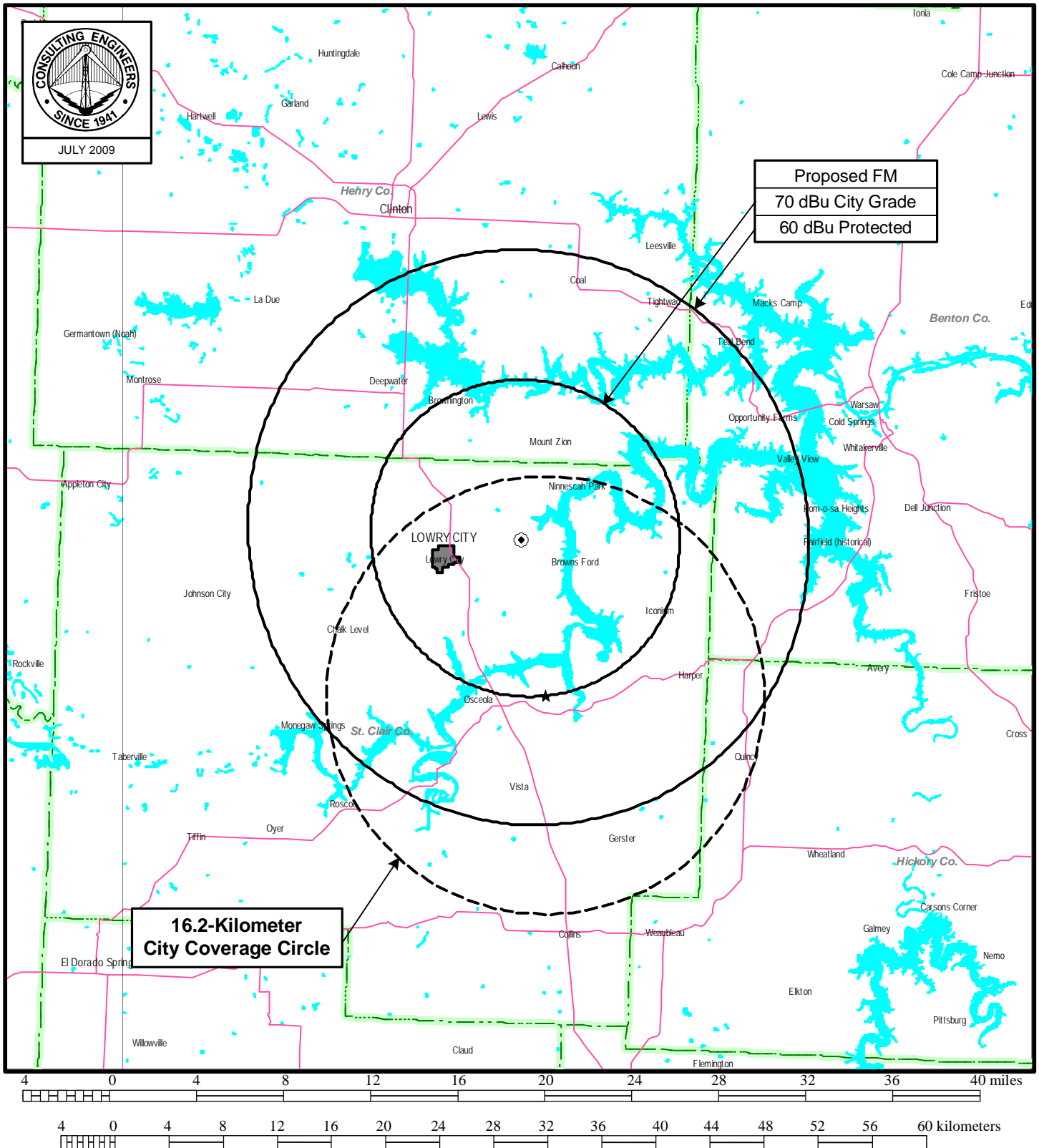
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Figure 3



## **PREDICTED COVERAGE CONTOURS**

**NEW FM STATION**

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LOWRY CITY, MO (ALLOTMENT REF POINT) FM SEPARATION STUDY

Channel: 285      Coordinates: 038-02-54 93-38-30  
Class: A      Buffer Distance: 16 km

Date: 07/31/2009

Callsign Fac. ID	Status ARN	Chan. ID	Serv. Type	Freq. Class	City DA Ant. ID	ERP(kW)	State HAAT(m)	Latitude Longitude	Dist.(km) Bear.(deg)	Sep.(km) 73.215	Spacing(km) Comment
<b>KKLH</b> 24424	LIC BMLH	284 20080229AAB	FM	104.7 C2	MARSHFIELD N	34	MO 181	037-12-21 092-54-20	113.87 145.09	106 <b>89 N</b>	7.87 <b>CLOSE</b>
<b>KVCY</b> 73062	LIC BLED	284 19970929KE	FM	104.7 C3	FORT SCOTT N	16	KS 125	037-52-43 094-43-24	96.9 259.08	89 <b>72 N</b>	7.9 <b>CLOSE</b>
<b>KRES</b> 35890	LIC BLH	284 19830124BA	FM	104.7 C	MOBERLY N	100	MO 311	039-27-35 092-42-07	176.69 27.15	165 <b>142 N</b>	11.69 <b>CLEAR</b>
<b>NEW</b> 170999	CP BNPH	285 20070419AEP	FM	104.9 A	LOWRY CITY N	6	MO 100	038-02-54 093-38-30	0 141.78	115 <b>92 N</b>	
<i>Applicant's existing authorization</i>											
	VAC RM	285 9845	FA	104.9 A	LOWRY CITY N		MO 100	038-02-24 093-38-28	0.93 176.99	115 <b>92</b>	
<b>KCJK</b> 87565	LIC BLH	286 20010620AAM	FM	105.1 C1	GARDEN CITY N	69	MO 349	039-05-26 094-28-18	136.44 328.35	133 <b>111 N</b>	3.44 <b>CLOSE</b>
<b>KOSP</b> 35427	LIC BLH	286 19940602KB	FM	105.1 C2	WILLARD N	50	MO 150	037-01-08 093-30-31	114.86 174.11	106 <b>89 N</b>	8.86 <b>CLOSE</b>
<b>KESM-FM</b> 72447	LIC BMLH	288 19921014KA	FM	105.5 A	EL DORADO SPRINGS N	6	MO 57	037-51-51 094-00-54	38.66 238.08	31 <b>25 N</b>	7.66 <b>CLOSE</b>

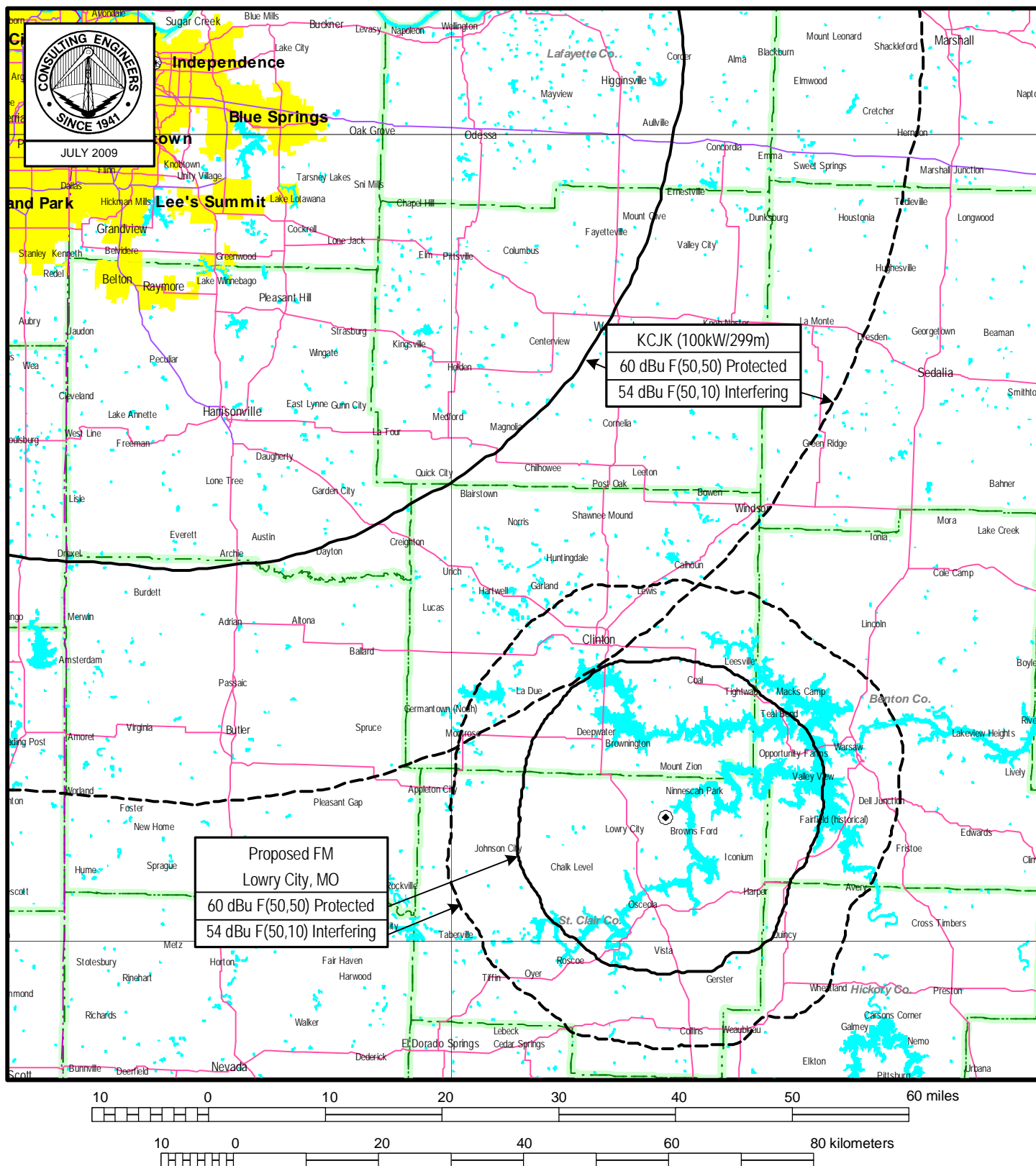
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LOWRY CITY, MO (PROPOSED SITE) FM SEPARATION STUDY

Channel: 285      Coordinates: 038-09-08 93-39-43  
Class: A      Buffer Distance: 16 km

Date: 07/31/2009

Callsign	Status	Chan.	Serv.	Freq.	City		State	Latitude	Dist.(km)	Sep.(km)	Spacing(km)
Fac. ID	ARN			Class	DA Ant. ID	ERP(kW)	HAAT(m)	Longitude	Bear.(deg)	73.215	Comment
<b>KRES</b> 35890	LIC BLH 19830124BA	284	FM	104.7	MOBERLY C	100	MO 311	039-27-35 092-42-07	167.39 29.48	165 <b>142 N</b>	2.39 <b>CLOSE</b>
<b>KVCY</b> 73062	LIC BLED 19970929KE	284	FM	104.7	FORT SCOTT C3 N	16	KS 125	037-52-43 094-43-24	98.03 252.21	89 <b>72 N</b>	9.03 <b>CLOSE</b>
<b>NEW</b> 170999	CP BNPH 20070419AEP	285	FM	104.9	LOWRY CITY A N	6	MO 100	038-02-54 093-38-30	11.67 171.26	115 <b>92 N</b>	-103.33 <b>SHORT</b>
	<i>Applicant's existing authorization</i>										
	VAC RM 9845	285	FA	104.9	LOWRY CITY A		MO	038-02-24 093-38-28	12.59 171.68	115 <b>92</b>	-102.41 <b>SHORT</b>
<b>KCJK</b> 87565	LIC BLH 20010620AAM	286	FM	105.1	GARDEN CITY C1 N	69	MO 349	039-05-26 094-28-18	125.79 326.26	133 <b>111 N</b>	-7.21 <b>SHORT</b>
	<i>Section 73.215 processing requested</i>										
<b>KESM-FM</b> 72447	LIC BMLH 19921014KA	288	FM	105.5	EL DORADO SPRINGS A N	6	MO 57	037-51-51 094-00-54	44.54 224.11	31 <b>25 N</b>	13.54 <b>CLEAR</b>



## PREDICTED SITE ALLOCATION STUDY

NEW FM STATION

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du Treil, Lundin & Rackley, Inc Sarasota, Florida