TECHNICAL EXHIBIT
AMENDMENT TO PENDING APPLICATION
NEW FM STATION
FACILITY ID 91797
SAN ANGELO, TEXAS
CH 207A 1 KW 244 M

Technical Narrative

This technical exhibit supports an amendment to the pending application for a new non-commercial educational (NCE) FM station on channel 207A (89.3 MHz) at San Angelo, Texas. The proposed FM station has a pending application to operate on channel 207A with a directional antenna maximum effective radiated power (ERP) of 3.0 kilowatts (kW) (vertical polarization only) and an antenna height above average terrain (HAAT) of 90 meters (BPED-19981005MD). This amendment proposes to change transmitter site, reduce ERP and increase HAAT.

Proposed Facilities

The proposed transmitter site is located 45 km northeast of the previous site (NAD27 coordinates: 31-41-59 N, 100-26-30 W). The FCC antenna structure registration number is 1041533 (see Figure 2). It is proposed to operate with a non-directional ERP of 1.0 kW, horizontal and vertical polarization, and an antenna HAAT of 244 meters.

Blanketing Interference Concerns

The 115 dBu predicted “blanketing” contour of the proposed station would extend radially 0.4 kilometer from the transmitting site. No interference problems are expected; however the applicant recognizes its responsibility to resolve complaints of blanketing interference as required by Section 73.318.

Coverage Contours

The FCC predicted coverage contour for the proposed FM station antenna was calculated in accordance with Section 73.313. No consideration was given to terrain roughness correction factors. The average elevations from 3 to 16 kilometers along 8 radials evenly spaced at 45-degree intervals were obtained from the U.S.G.S. 3-second digitized terrain database. The antenna radiation center heights above average terrain in the individual directions and the ERP were used in conjunction with the F(50,50) curves of Section 73.333 (Figure 1) to determine distances to contour.

The coverage map in Figure 3 shows the proposed FM station’s 60-dBu coverage contour. The total population of San Angelo, TX according to the 2000 U.S. Census is 88,439 people, of which 45,800 people, or 52 percent, fall within the 60-dBu contour of the proposed FM station. Therefore, the proposed FM station meets the coverage requirement in Section 73.515 of the Commission’s rules to provide at least 50% of the population within the community of license with a 60 dBu signal.

Allocation Considerations

Sheet 1 of Figure 4 contains a contour overlap study based on pertinent co-channel and adjacent protected and interfering contours as specified in Section 73.509 of the Commission's rules. The allocation requirements outlined in Section 73.509 concern only prohibited overlap, not separation requirements. The FCC's FM database was used as the basis for the study. The study indicates that there are no short-spacings to any pertinent commercial channel stations. It does indicate that there is a short-spacing to a non-commercial channel station, namely a CP in Big Spring, Texas, on channel 207A, which has pertinent protected and interfering contours plotted on the map in Sheet 2 of Figure 4. It is noted that no prohibited overlap will occur between the proposed FM operation and the Big Spring CP.

The proposed site is 233 kilometers from the closest point of the Mexican border. It is noted that the proposed site is located 45 kilometers northeast of the original application site, or 32 km farther from the closest point of the Mexican border. The proposed 34 dBu F(50,10) "worst-case" interfering contour does not extend into Mexico. Therefore, it is believed that the proposal complies with the U.S./Mexican FM Agreement.

The closest FCC monitoring station is at Kingsville, Texas located more tan 500 kilometers to the south-southeast. The closest radio astronomy site conducting research on TV channel 37 is at Fort Davis, TX located more than 350 kilometers to the west-southwest. These separations are considered sufficient to avoid interference from the proposed operation.

Channel 6 Protection

Station KIDY-TV on channel 6 (San Angelo, TX) is located 14.2 kilometers southwest of the proposed FM station. The proposed FM interfering contour is located entirely within the predicted City Grade contour for KIDY-TV. Figure 5 is a map showing the City Grade and Grade A contours for KIDY-TV and the interfering contour for the proposed FM station, as specified in Section 73.525. The map also shows the minor civil divisions (MCD) for the surrounding counties.

The population within the predicted interference area was determined by a computer program, which adds the populations of census enumeration districts whose centroids lie within the contour. The 2000 U.S. Census was employed. The population within the predicted interference area is 37 (less than the limit of 3000 people per Section 73.525(c)).

Radiofrequency Electromagnetic Field Exposure

The proposed FM facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. A “worse-case” relative field value of 1.0 was used for the new FM operation’s non-directional antenna, along with a combined ERP of 2.0 kW (1.0 kW horizontal polarization & 1.0 kW vertical polarization). The proposed power density at the base of the structure and 2 meters above ground level (166 meters) is calculated to be 0.002 mW/cm^2, which is 1.2% of the recommended limit of 0.2 mW/cm^2 for FM channels, applicable to general population/uncontrolled exposure areas.

Access to the transmitting site is 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 stations are at reduced power or shut down. The proposed new FM operation appears to be otherwise categorically excluded from environmental processing.

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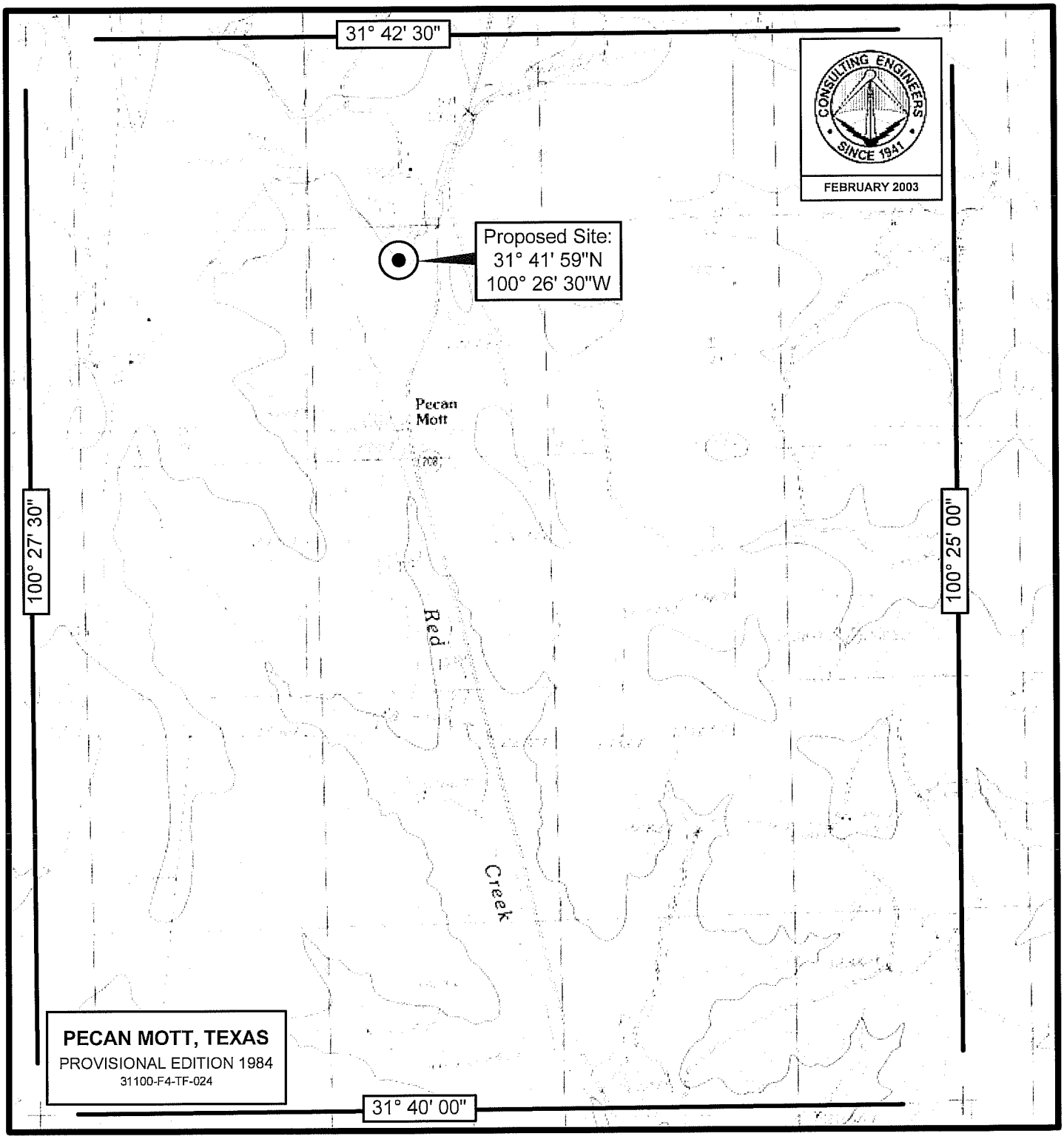
Figure 1



1.0 0.5 0 1.0 miles

0.5 0 0.5 1.0 1.5 2.0 2.5 kilometers

PROPOSED TRANSMITTER LOCATION

NEW FM STATION

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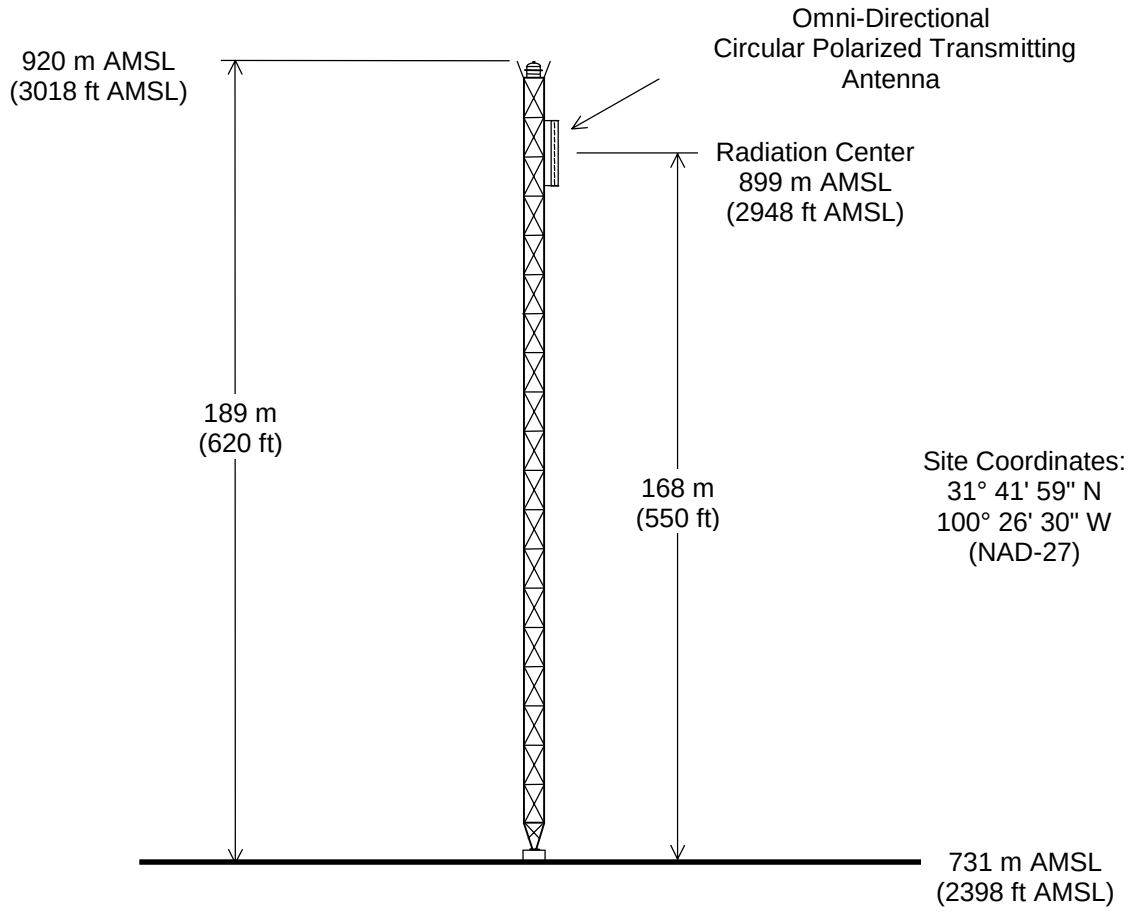
du Treil, Lundin & Rackley, Inc. Sarasota, Florida

CONSULTING ENGINEERS SINCE 1941
FEBRUARY 2003

Antenna Reg. No. 1041533



Not to Scale

PROPOSED ANTENNA AND SUPPORTING STRUCTURE

NEW FM STATION

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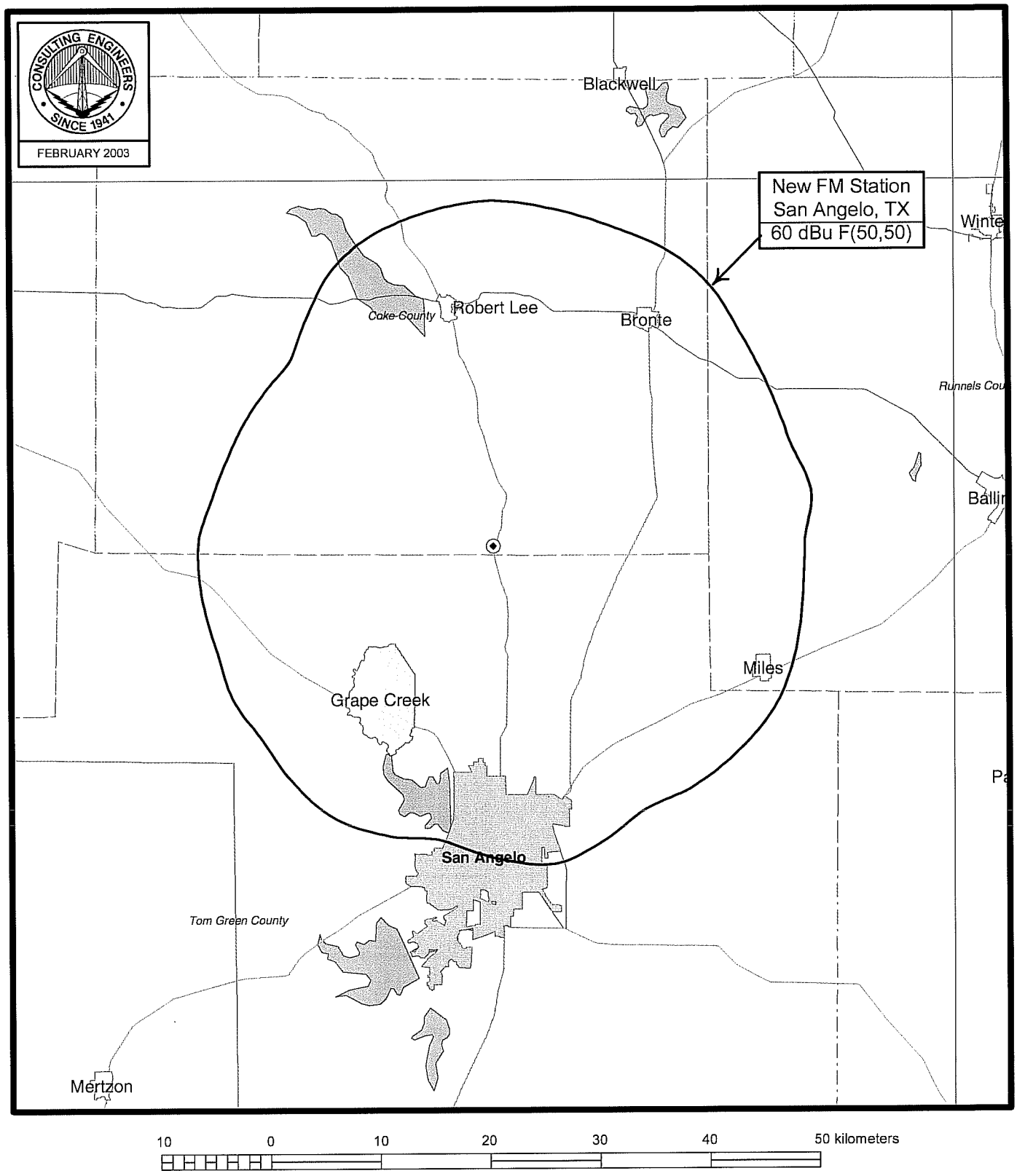
Figure 3



PREDICTED COVERAGE CONTOUR

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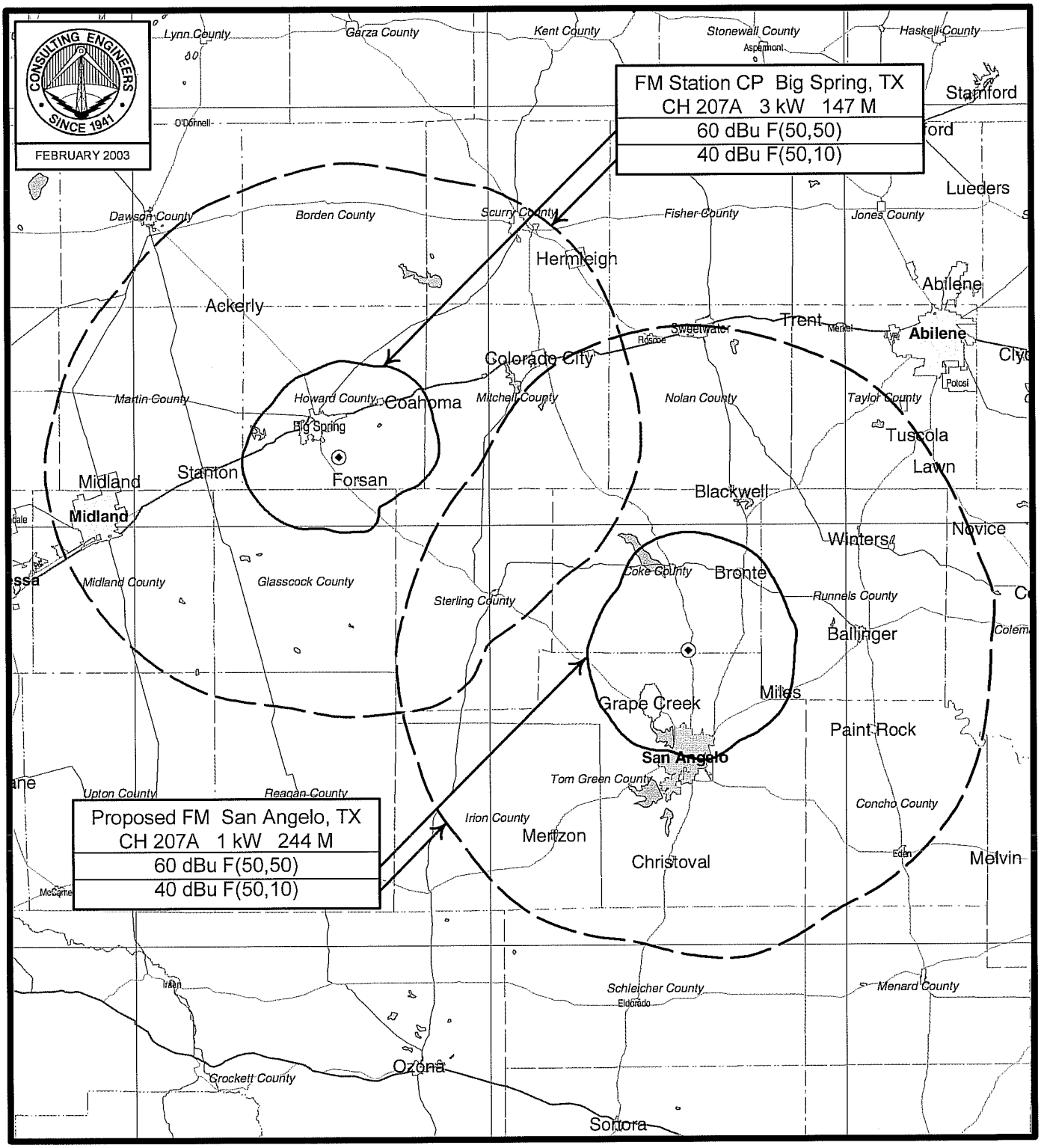
CDBS FM SEPARATION STUDY – PROPOSED SITE

Separation Buffer: 100 km

Channel: 207A Coordinates: 31-42-00 N 100-26-30 W

Call Id	City St Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km) 73.215	73.207
	BROWNWOOD		205C		N	31-43-12	N	88.7	138.26	89.0	95.0
96172	TX VAC C		88.9			098-59-00					
981005	SAN ANGELO	BPED	207A	3.0	Y	31-18-41	N	162.9	**45.09**	**92.0**	
91797	TX APP C 19981005MD		89.3	90	15728	100-18-07					
(Applicant's Existing Proposed Facility.)											
980417	BIG SPRING	BPED	207A	3.0	N	32-09-51	N	299.4	**106.21**	**92.0**	**115.0**
90502	TX CP C 19980417MG		89.3	100		101-25-27					
(No actual contour overlap. See Figure 4, Sheet 2).											
970612	BIG SPRING		207A		N	32-15-03	N	302.4	115.37	92.0	115.0
87090	TX VAC C		89.3			101-28-38					
KPBE	BROWNWOOD	BLED	207A	6.0	N	31-47-43	N	85.6	154.15	92.0	115.0
88313	TX LIC C 19991209AAC		89.3	100	30218	098-49-07					
KBMM	ODESSA	BPED	208C2	25.0	N	31-40-35	N	269.7	181.80	89.0	106.0
82034	TX APP C 20011226AAV		89.5	163		102-21-32					
KACU	ABILENE	BLED	209C2	33.0	N	32-28-34	N	38.6	110.58	49.0	55.0
300	TX LIC C 19860616KA		89.7	66		099-42-22					
KYZZ	SAN ANGELO	BLH	261C2	35.0	N	31-29-46	N	188.5	22.86	0.0	15.0
17778	TX LIC C 19960227KA		100.1	103		100-28-39					
KYZZ	SAN ANGELO		261C2		N	31-29-46	N	188.5	22.86	0.0	15.0
17778	TX USE C		100.1			100-28-39					



CONTOUR OVERLAP MAP

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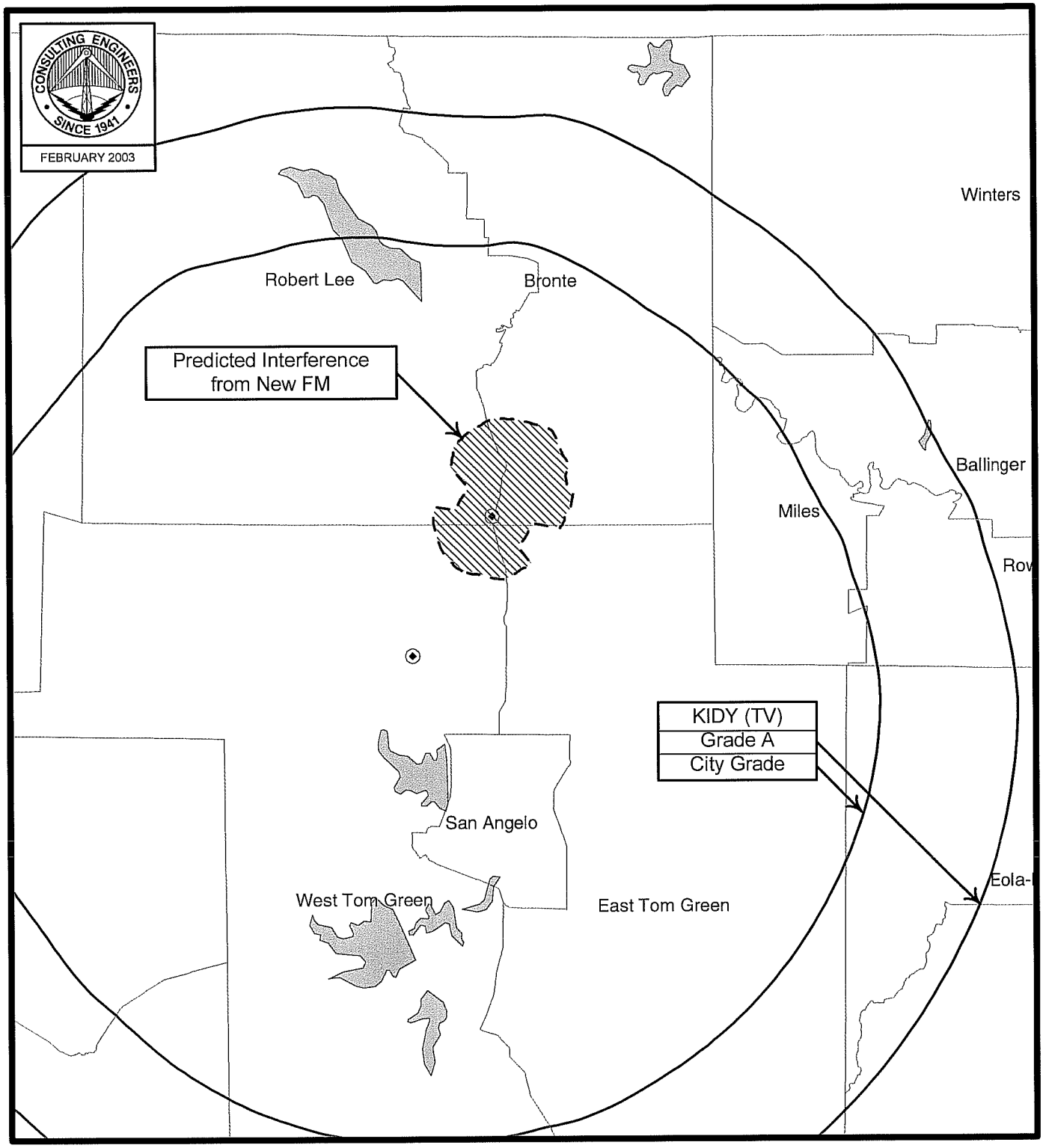
Figure 5



CH 6 INTERFERENCE MAP
INCLUDING CENSUS MINOR CIVIL DIVISIONS

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