APPLICATION FOR CONSTRUCTION PERMIT INFORMATION
RADIO STATION KLHC
BAKERSFIELD, CALIFORNIA

1350 KHZ 1 KW-D 0.012 KW-N U ND

June 27, 2017

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Executive Summary - KLHC

This engineering exhibit supports an application for construction permit for radio station KLHC in Bakersfield, California. KLHC is presently licensed to operate unlimited time on 1350 kilohertz with 1.0 kilowatt in the daytime and 0.033 kilowatt in the nighttime, utilizing a non-directional antenna. By means of this present application, the licensee proposes a new antenna with a decrease in height and correction of geographic coordinates to newly determined values. The daytime power will continue to be 1.0 kilowatt and secondary nighttime power will be reduced to 0.012 kilowatt.

The proposal is classified as a minor change according to 47 CFR 73.3571(a)(2). As a Class D station operating on one of the channels listed in 73.26(a), the proposal satisfies 47 CFR 73.21(a)(3) which permits operation with a nominal daytime power of not less than 0.25 kilowatt nor more than 50 kilowatts and nominal secondary nighttime power less than 0.25 kilowatt.

The proposed tower is a low profile KinStar model with an AGL of 20.7 meters(68 feet). As the proposed tower passes the TOWAIR criterion, it is excluded from FAA approval and Antenna Structure Registration(ASR).

Matthew Folkert

June 27, 2017

Broadcast Facility - KLHC

The proposed facility complies with the engineering standards and assignment requirements of 47 C.F.R. Sections 73.24(e), 73.24(g), 73.33(a), 73.45, 73.160, 73.182(a)-(d), 73.189 and 73.1650. Information included herein demonstrates compliance with all relevant requirements. The technical equipment proposed, the location of the transmitter, and other technical phases of operation comply with the regulations governing the same, and the requirements of good engineering practice.

Proposed Transmitter Location

The proposed KLHC antenna will be located at NAD27 coordinates:

35-20-59 North
118-58-49 West

It will be utilized for both the daytime and nighttime non-directional operation.

Ground System

The ground system at the transmitter site consists of 120 equally-spaced buried copper wire radials extending to an average length of 55.5 meters (182 feet) with an additional 120 15.2 meter (50 feet) radials interspersed with them around the tower base.

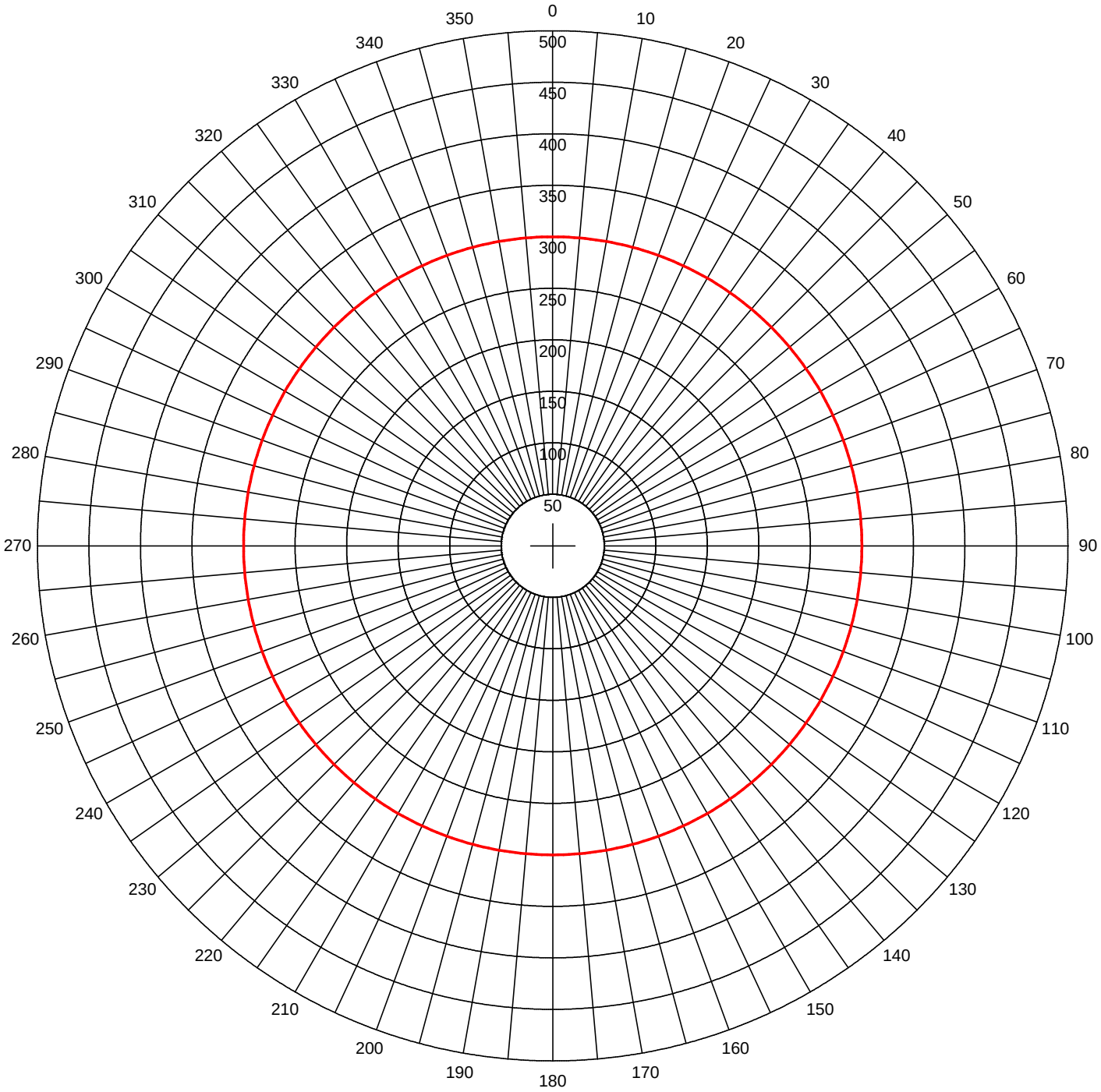
Proposed Non-Directional Antenna

A FCC-approved Kinstar non-directional antenna will be employed for daytime and nighttime operation. The antenna consists of a short vertical element with a large amount of top-loading. The vertical portion of the antenna is designed for an electrical length of 28.8 degrees with a top-loading of 61.2 degrees. The non-directional antenna radiation efficiency is 300 mV/m at one kilometer for one kilowatt. Each Kinstar antenna is manufactured to produce these electrical characteristics at the design frequency.

Proposed Non-Directional Antenna Patterns

Polar graphs of the proposed non-directional horizontal plane radiation patterns appear on the following pages.

Proposed Daytime Nondirectional Pattern



Erss = 300.00 mV/m@1km
Theo RMS: 300.0 mV/m@1km

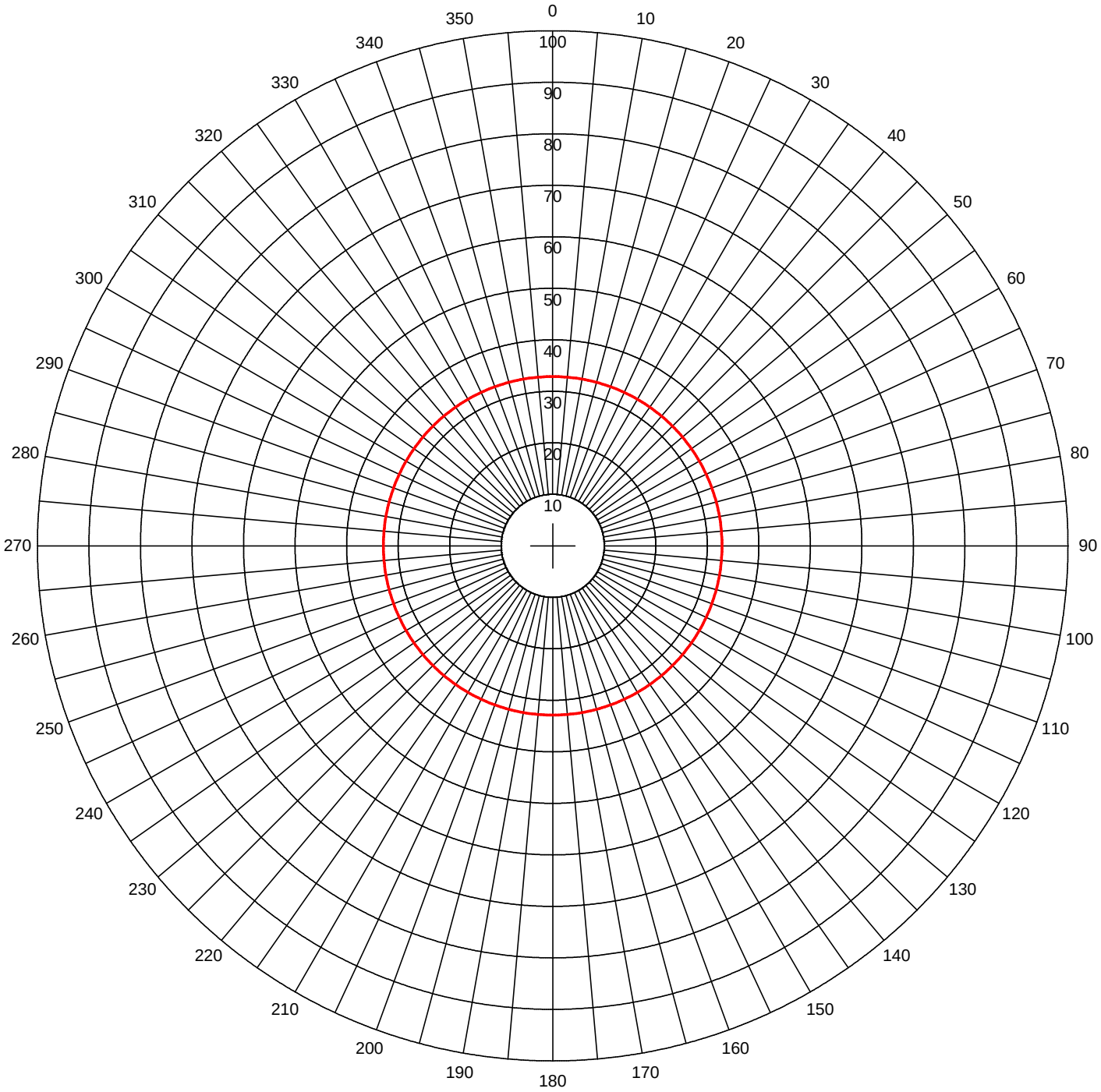
Theoretical Horizontal Plane Pattern

Pattern (mV/m @ 1km)
Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	-999.0	0	1	28.8	61.2	0.0	0.0

Call: KLHC
Freq: 1350 kHz
BAKERSFIELD, CA, US
Hours: D
Lat: 35-20-59 N
Lng: 118-58-49 W
Power: 1.0 kW
Theo RMS: 300.0 mV/m@1km

Proposed Nighttime Nondirectional Pattern



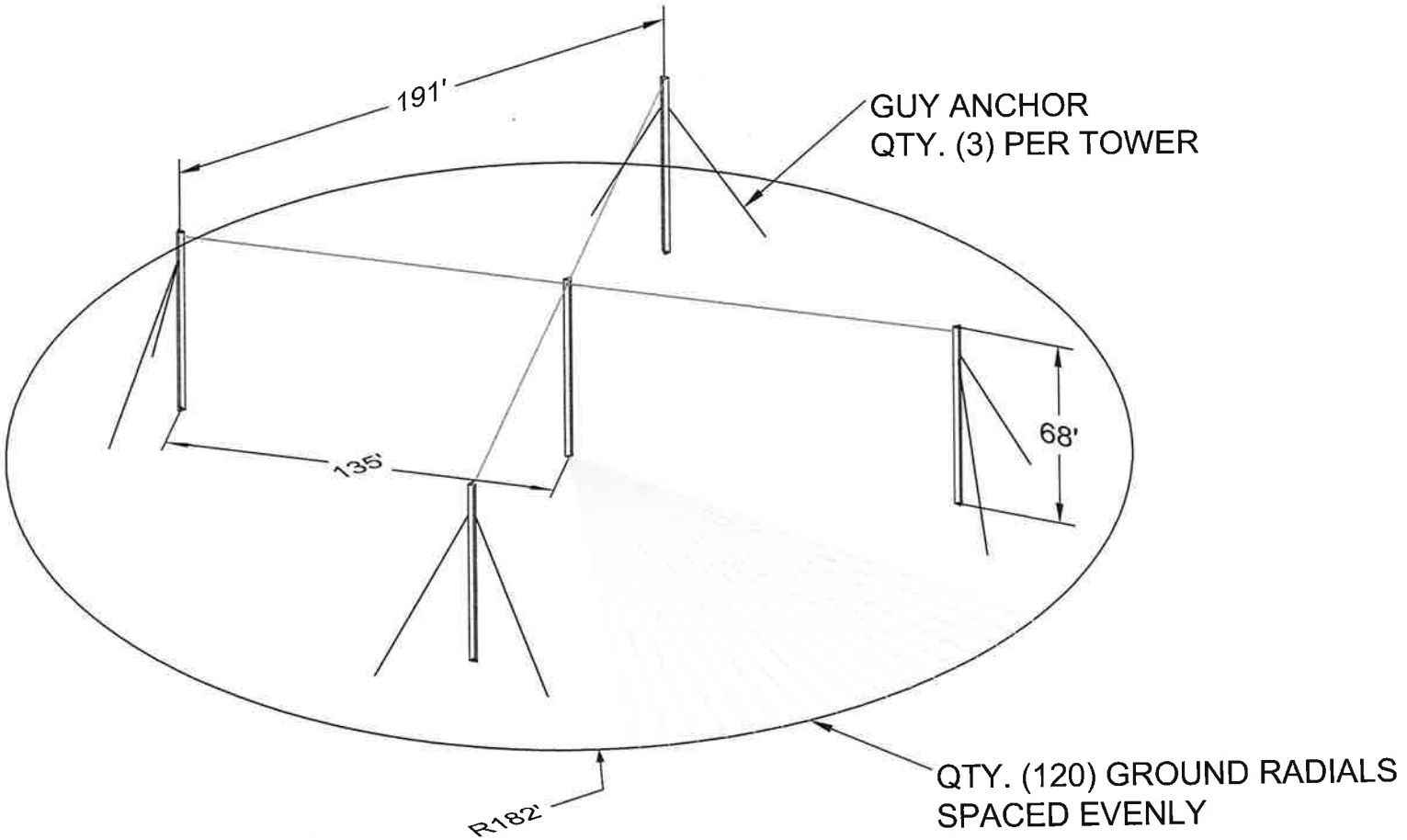
Erss = 32.86 mV/m@1km
Theo RMS: 32.863 mV/m@1km

Theoretical Horizontal Plane Pattern

Pattern (mV/m @ 1km)
Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	-999.0	0	1	28.8	61.2	0.0	0.0

Call: KLHC
Freq: 1350 kHz
BAKERSFIELD, CA, US
Hours: N
Lat: 35-20-59 N
Lng: 118-58-49 W
Power: 0.012 kW
Theo RMS: 300.0 mV/m@1km

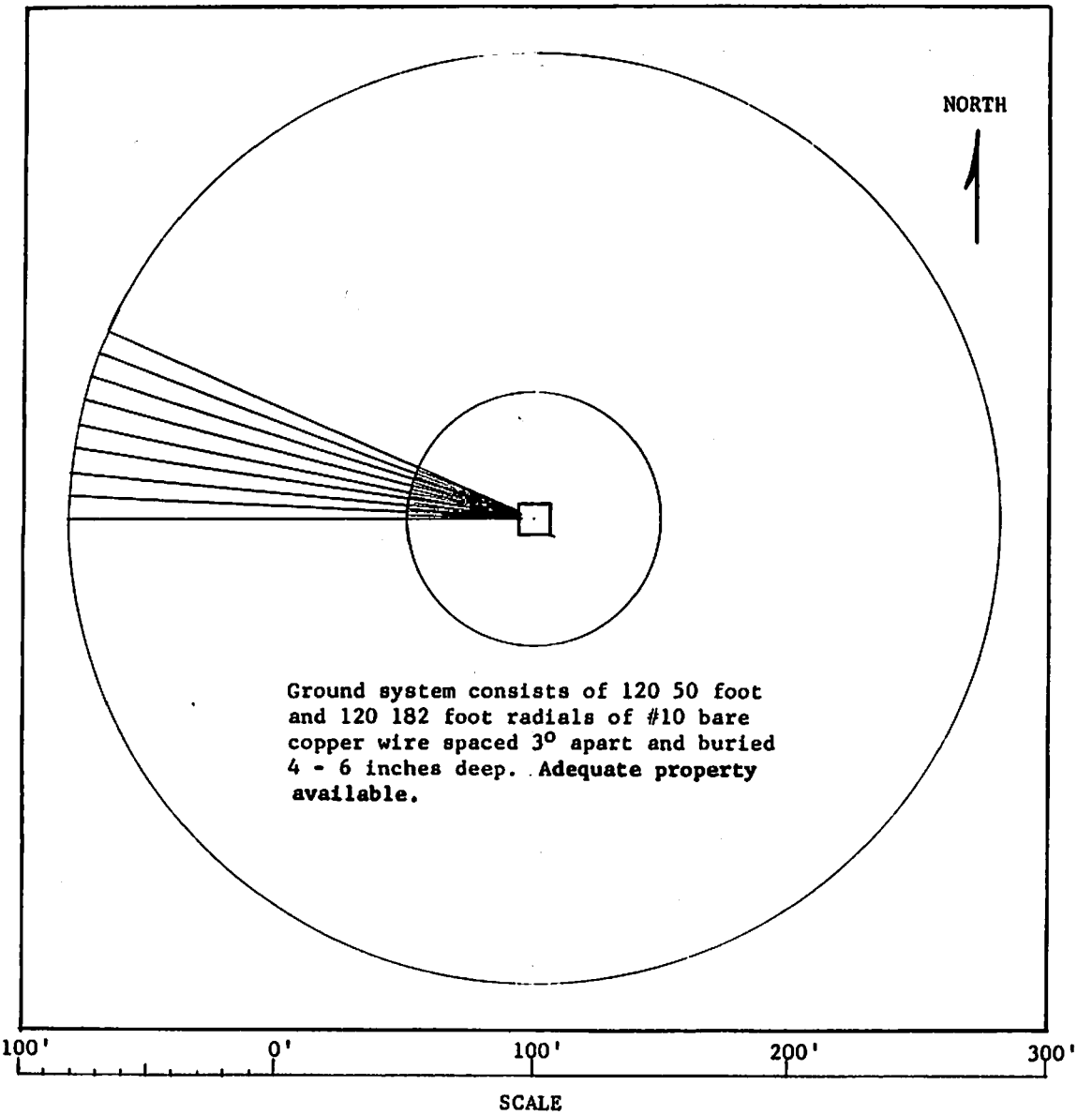


KINTRONIC LABORATORIES INC.
BLUFF CITY, TN.

TYPICAL KINSTAR ANTENNA LAYOUT
WITH APPROX. PHYSICAL DIMENSIONS
FREQ. = 1350 KHz

REF DWG:	DRAWN:	DESIGNED:
	SCD	TFK
REV:	CHECKED:	APPROVED:
DWG NO:	DATE:	SCALE:
A-5471(1350)	21/Jun/2017	N. A.

NOTES:
1. ALL DIMENSIONS ARE APPROXIMATE
2. SYSTEM SCALED FOR 1350kHz
3. WOODEN UTILITY POLES TO BE 68' AGL, TOTAL LENGTH 76'



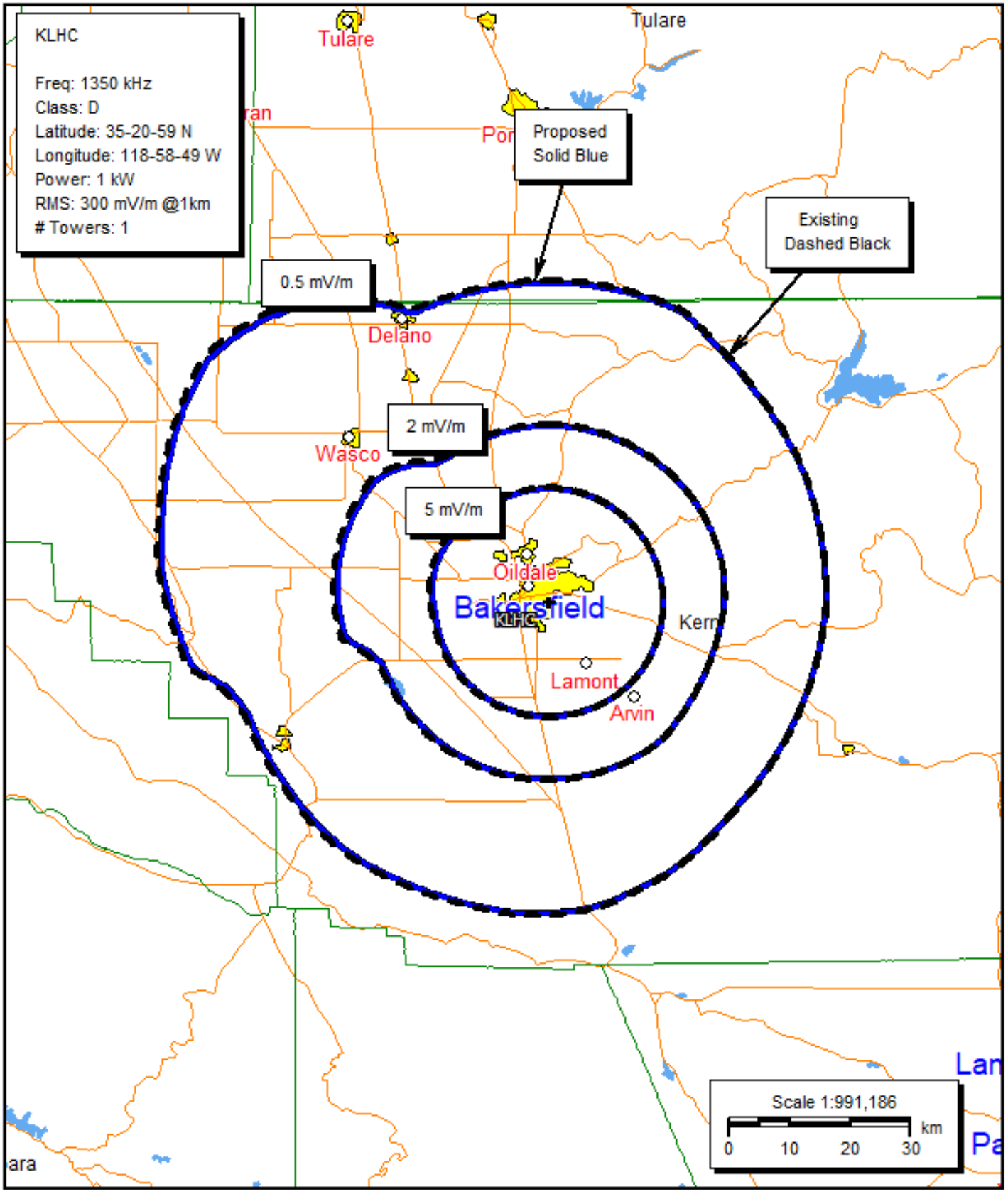
SKETCH OF GROUND SYSTEM
PROPOSED STATION - BAKERSFIELD, CALIFORNIA
1350 KC - 1 KW - DAY

GAUTNEY & JONES
RADIO ENGINEERS WASHINGTON, D. C.
November, 1957

FROM APPLICATION FOR CP FILE NUMBER BP-11190

Principal Community Coverage and Service Contours - KLHC

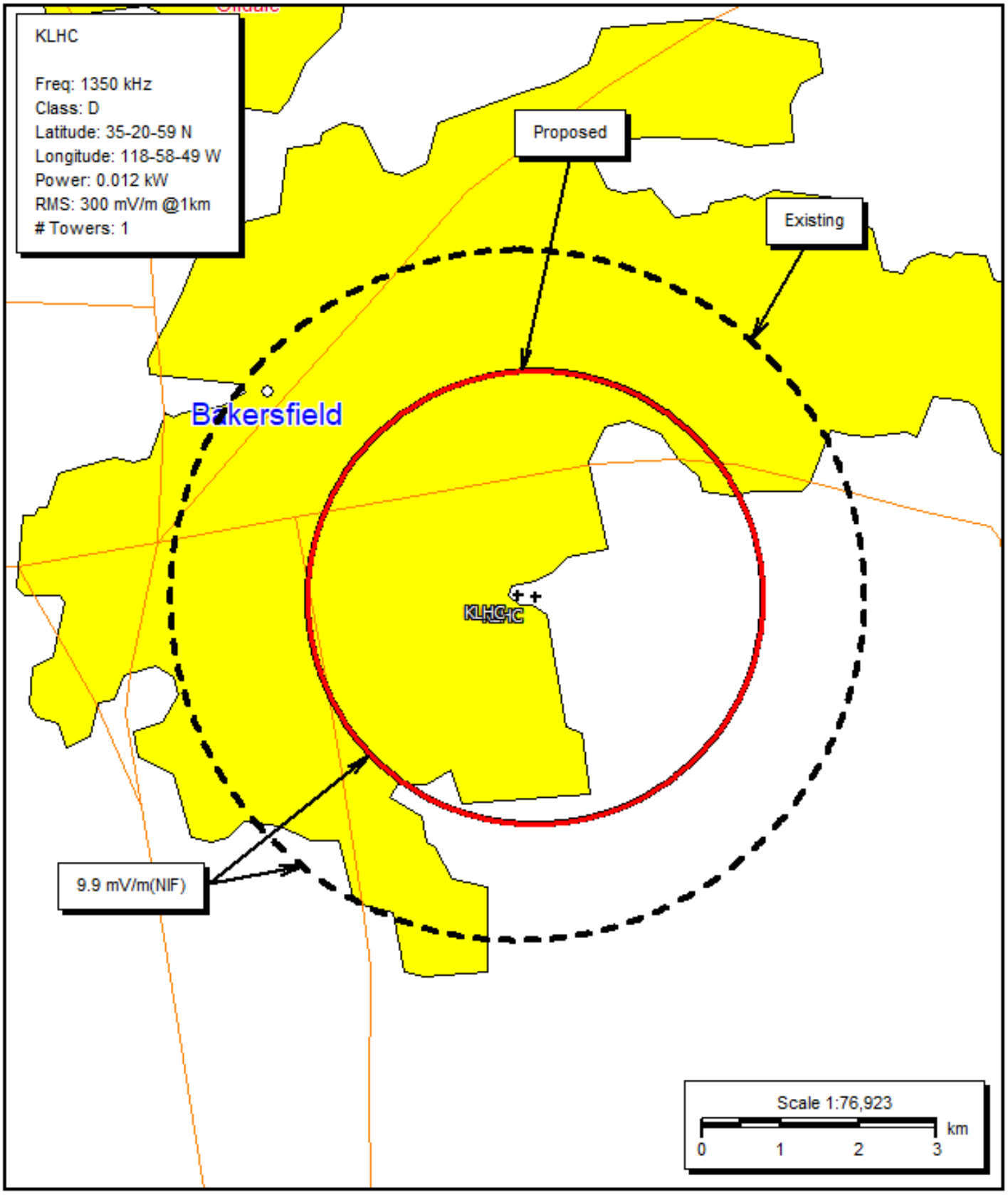
The proposed facility complies with the community coverage requirements of 47 C.F.R. Section 73.24(i). The daytime 5 mV/m contour coverage of the city of license remains unchanged. There is no minimum requirement for the secondary nighttime operation.



DAYTIME PRINCIPAL COMMUNITY COVERAGE AND SERVICE CONTOURS

RADIO STATION KLHC
BAKERSFIELD, CALIFORNIA
1350 KHZ 1 KW-D 0.012 KW-N U ND

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



NIGHTTIME PRINCIPAL COMMUNITY COVERAGE AND SERVICE CONTOURS

RADIO STATION KLHC
BAKERSFIELD, CALIFORNIA
1350 KHZ 1 KW-D 0.012 KW-N U ND

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

Allocation Requirements - KLHC

The proposed facility complies with the requirements of 47 C.F.R. Section 73.37 and 73.182. The daytime allocation considerations remain practically unchanged as all allocation contours of the proposed facility lie within the corresponding contours of the existing facility. A nighttime allocation study shows protection to all applicable stations with domestic and international allotments. The following figures support a conclusion that this proposal comports with all interference protection requirements.

Allocation Study Data

A tabulation of pertinent data regarding the nighttime study appears on the following pages.

Nighttime Allocation Study

Night Allocation Protection Report

Call: KLHC
Freq: 1350 kHz
BAKERSFIELD, CA, US
Hours: N
Lat: 35-20-59 N
Lng: 118-58-49 W
Power: 0.012 kW
Theo RMS: 300.0 mV/m @ 1km @ 1kW

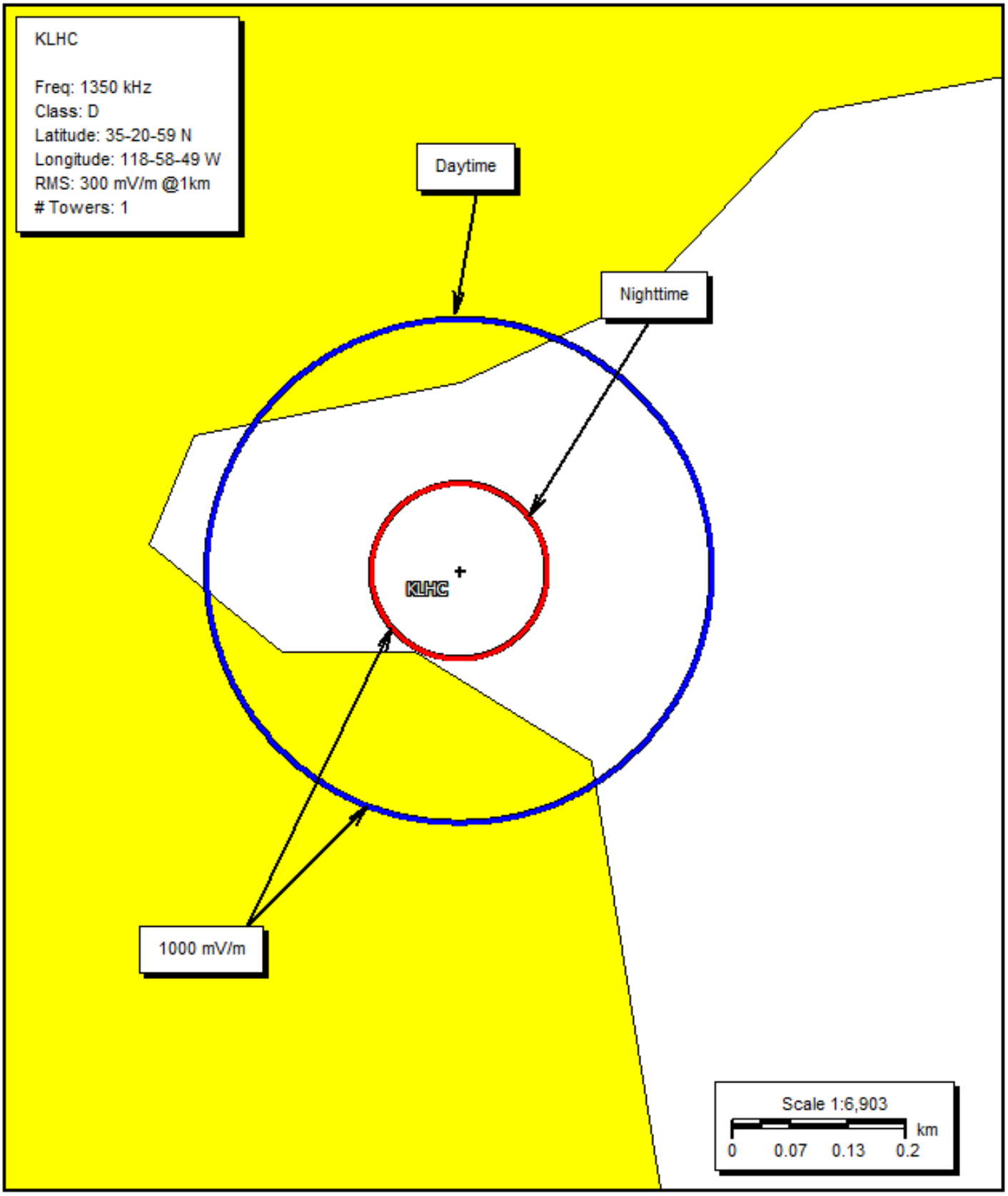
#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	-999.0	0	1	28.8	61.2	0.0	0.0

Call Letters	Ct	St	City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KTDD	US	CA	SAN BERNARDINO	287.13	1.595	27.78	26.80	0.98
	50% = 6.141, 25% = 6.38; KSRO=4.73 XETM/A=3.92 KABQ=1.73							
KSRO	US	CA	SANTA ROSA	127.99	0.950	37.12	31.56	5.56
	50% = 2.555, 25% = 3.8; KFIV=1.52 XETM/A=1.50 KPYV=1.40 KOMY=1.27 KXEQ=1.17 KTDD=1.17 KATA=1.14 KABQ=1.12 KCBL=1.02							
XETM/O	MX	SO	NACO	69.06	2.344	169.72	32.40	137.32
	50% = 4.826, 25% = 6.542; XETB/A=3.32 XEVU/A=2.60 XEEGJ/A=2.34 WWWL=2.22 KCCY=2.18 XE0013/A=1.92 XE/A=1.79 KSRO=1.71							
XETM/A	MX	SO	NACO	68.99	2.348	170.19	32.41	137.78
	50% = 4.832, 25% = 6.547; XETB/A=3.32 XEVU/A=2.61 XEEGJ/A=2.35 WWWL=2.22 KCCY=2.18 XE0013/A=1.93 XE/A=1.79 KSRO=1.71							
KRLC	US	ID	LEWISTON	29.24	1.027	175.62	32.79	142.84
	50% = 3.284, 25% = 4.108; KSRO=2.16 KRNT=1.84 KKMO=1.66 KJOX=1.35 KWVR=1.27 KYLT=1.18 KYSP=1.13							
KTIK	US	ID	NAMPA	48.12	2.044	212.35	32.63	179.72
	50% = 8.174, 25% = 8.174; KRLC=7.10 KSRO=4.06							
KCCY	US	CO	PUEBLO	28.31	1.359	240.06	32.80	207.26
	50% = 4.031, 25% = 5.597; XETM/A=2.89 KRNT=2.10 KABQ=1.87 WWWL=1.84 KSRO=1.80 WTDR=1.55 NEW WINNIPEG/ =1.49 KCOR=1.41 KTDD=1.36							
KABQ	US	NM	ALBUQUERQUE	38.44	2.085	271.24	32.74	238.50
	50% = 7.251, 25% = 8.341; XETM/A=6.24 KCCY=3.68 KCOR=3.06 WWWL=2.77							
KLSD	US	CA	SAN DIEGO	188.29	1.182	313.81	30.25	283.56
	50% = 3.641, 25% = 4.727; KKMO=2.38 KWRM=2.05 KSCJ=1.83 WSAI=1.53 KMNY=1.44 KTDD=1.28 KPXQ=1.24 XEHF/A=1.22							
KFIV	US	CA	MODESTO	204.61	1.983	484.63	29.85	454.79
	50% = 6.998, 25% = 8.108; KLSD=4.98 KKMO=4.92 KOHU=2.77 KRKK=2.27 KPXQ=1.98							
KRNT	US	IA	DES MOINES	8.96	0.948	528.79	32.86	495.93
	50% = 2.828, 25% = 3.79; KSCJ=1.95 WWWL=1.45 WOAM=1.44 KCCY=1.25 WARF=1.21 KROC=1.08 KXEO=1.07 KROS=1.01							

Item 4

Blanketing - KLHC

The provisions of 47 CFR 73.24(g) require that the population within the 1,000 mV/m contour not exceed 300 persons or 1 percent of the population within the 25 mV/m groundwave contour. At the proposed location, during daytime hours, the proposed 1,000 mV/m contour encompasses 350 persons or 0.17 % of the 210,188 persons encompassed in the 25 mV/m contour. During nighttime hours, the proposed 1,000 mV/m contour encompasses 0 persons. Thus, the requirements of 47 CFR 73.24(g) are met.



BLANKETING CONTOURS

RADIO STATION KLHC
BAKERSFIELD, CALIFORNIA
1350 KHZ 1 KW-D 0.012 KW-N U ND

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

Environmental Protection - KLHC

The proposed facility is excluded from environmental processing under the requirements of 47 C.F.R. Section 1.1306. The proposed facility will not have a significant environmental impact and will comply with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments.

The proposed KLHC operation was evaluated in terms of both the electric and magnetic field components which will be present at the base of each tower. Using Figures 24 through 36 of the FCC accepted report, "ENGINEERING REPORT FOR EXPERIMENTAL STATION WS2XTR AND REQUEST FOR APPLICATION OF 47 CFR 73.160(b)(2) FOR THE KINSTAR AM TRANSMITTING ANTENNA FOR GENERAL USE BY AM RADIO STATIONS IN THE UNITED STATES" dated July 30, 2004, the worst case interpolated distance at which the electric and magnetic fields would fall below ANSI guidelines is 5 meters. Accordingly, the areas surrounding the base of each tower will be appropriately restricted with a fence having a minimum radius of 5 meters (16 feet) unless data obtained after construction has been completed indicates otherwise. The fence will assure that persons on the property outside the fenced area will not be exposed to radiofrequency field levels in excess of those recommended by the ANSI. In addition, warning signs will be posted.