Anderson Communications, LLC

Broadcast Consultants
1519 Euclid Avenue
Bowling Green, KY 42103

Telephone 270-782-0246
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TECHNICAL REPORT

This technical report has been developed in support of an application for a new FM booster for the licensed KHYZ facility. Although there is a CP for a booster for the KHYZ CP, it is respectfully requested that this application be granted for the licensed facility in view of the fact that the construction of the CP facility is expected to require many months or perhaps years given the challenges of the mountainside location.

I. Allocation Analysis:

The data for all terrain utilized in this report were obtained from the V-Soft 30 second database. All relevant contours were calculated utilizing the V-Soft FMCommander, Probe 3 and Contour programs.

Exhibit E1 demonstrates that the proposed KHYZ 0.220 kW booster meets all Commission Section 74.1203 requirements with respect to existing or protected facilities. The HAAT has been calculated over 12 evenly spaced radials to be 337 meters. The booster's 54 dBu will be contained within the KHYZ licensed 54 dBu as demonstrated in exhibit E2. The proposed antenna is an ERI 1091-1CP-DA one bay directional panel antenna, and the rotated pattern is included as E4.

It is also noted that the proposed facility meets the required I.F. separation required for its equivalent class of C3 – 60 dBu for 0.220 kW/ 337 meters HAAT.

II. Site:

The proposed facility will be located on an existing communications tower atop Black Mountain (American Towers ASR #1203429). The site coordinates are:

(NAD 27) 36-00-27 N 115-00-24 W

III. Antenna System and Environmental Considerations:

The single bay panel antenna will be mounted at 21 meters AGL. The vertical pattern included as E2A has been used in the RF calculation. The RF is calculated based on a worst case vertical factor of 0.260 at -85 degrees elevation.

The RF contribution of the proposed booster was calculated to be 2.25 microwatts/cm2 at 2 meters AGL or 0.11% of the maximum 1000 uwatts/cm2 for a controlled occupational access environment, less than the 5% of the applicable limit

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required for consideration. The tower is located in a controlled communications site environment where the only access is blocked by a locked gate. Furthermore, the RF level is below the 5% level even for general public exposure.

$$S \text{ (RF in microwatts/cm2)} = \frac{33.4 \text{ (F2 – Vert Factor) X (H ERP + V ERP in watts)}}{R2 \text{ (distance to radiation center in meters)}}$$

IV. Conclusion:

It is concluded that the proposed KHYZ booster meets all applicable Commission rules and policies.

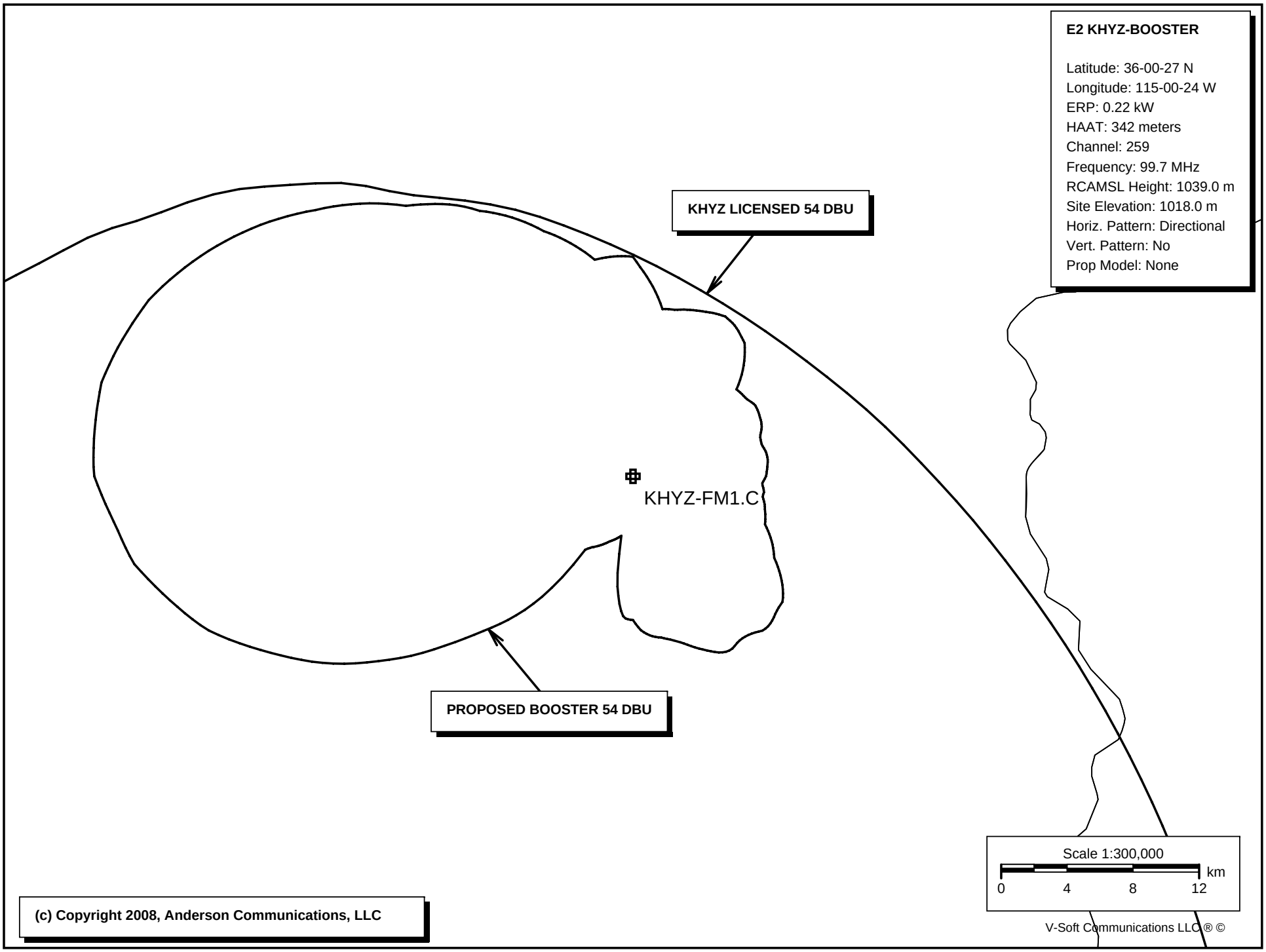
Charles M. Anderson October 20, 2008

E1 BOOSTER FOR KHYZ LICENSED FACILITY CHANNEL STUDY

REFERENCE CH# 259D - 99.7 MHz, Pwr= 0.22 kW, HAAT= 342.3 M, COR= 1039 M DISPLAY DATES
36 00 27.0 N. Average Protected F(50-50)= 23.31 km DATA 10-18-08
115 00 24.0 W. Standard Directional SEARCH 10-20-08

CH CALL / CITY	TYPE ANT / STATE	AZI / <--	DIST / FILE #	LAT / LNG	PWR(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / LICENSEE	*IN* (Overlap in km)	*OUT* (Overlap in km)
259D KHYZ-FM1 Las Vegas	CP DC_ NV	0.0 0.0	0.00 BMPFTB20061027AAA	36 00 27.0 115 00 24.0	2.500	45.6 1039	12.6 Khwy, Inc.	-54.27*	-45.88*
259B KHYZ Mountain Pass	CP _CX CA	215.3 35.1	73.36 BPH20080403AAQ	35 28 05.0 115 28 32.0	50.000 150	176.6 1378	80.6 Khwy, Inc.	-108.79*	-25.58*
259B KHYZ Mountain Pass	LIC _C_ CA	221.0 40.7	75.95 BMLH20020228ADC	35 29 27.0 115 33 27.0	8.400 551	158.5 1864	72.8 Khwy, Inc.	-90.82*	-24.43
257C0 KRGT Indian Springs	LIC _CX NV	305.2 124.9	61.40 BLH20021203ACS	36 19 28.0 115 33 58.0	31.000 690	10.5 2661	92.2 Univision Radio License Co	31.73	-35.51*
257D KRGT-FM1 Las Vegas	LIC DC_ NV	58.3 238.3	0.12 BLFTB20050815AED	36 00 29.0 115 00 20.0	6.000	1.0 1027	18.3 Hbc License Corporation	-6.14*	-18.82*
261D K261BZ Las Vegas	LIC DHN NV	253.9 73.7	45.81 BLFT19880429TA	35 53 34.0 115 29 40.0	0.165 560	0.7 1909	26.7 Hilltop Church	24.41	13.07
205C KNPR Las Vegas	CP _CX NV	264.1 83.8	44.70 BPED20061108AIA	35 57 55.0 115 29 58.8	22.000 1190	12.8 2639	58.8 Nevada Public Radio	28.5R	16.2M
205C KNPR Las Vegas	LIC _C_ NV	264.4 84.1	44.86 BLED20031205AFO	35 58 02.0 115 30 06.0	24.500 1122	12.8 2573	58.8 Nevada Public Radio	28.5R	16.4M
257C KRGT Indian Springs	RSV __N NV	302.8 122.4	85.59	36 25 18.0 115 48 35.0	100.000 600	5.0 2477	45.6 Univision Radio License Co	60.83	35.02
259D K259BL Las Vegas	LIC _C_ NV	27.9 208.2	88.28 BLFT20080311ABT	36 42 33.0 114 32 35.0	0.050	36.0 710	10.7 Ondas De Vida Network, Inc	45.44	49.26
260C RDEL St. George	DEL ___ UT	48.7 229.7	198.44	37 10 27.0 113 19 34.0	100.000 600	146.4 1737	100.1 Smoke & Mirrors, Llc Et. A	46.84	89.75

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. Reference zone = 2, Co to 3rd adjacent.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.
Reference station has protected zone issue: AM tower


E2 KHYZ-BOOSTER
Latitude: 36-00-27 N
Longitude: 115-00-24 W
ERP: 0.22 kW
HAAT: 342 meters
Channel: 259
Frequency: 99.7 MHz
RCAMSL Height: 1039.0 m
Site Elevation: 1018.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
KHYZ LICENSED 54 DBU
KHYZ-FM1.C
PROPOSED BOOSTER 54 DBU
Scale 1:300,000
0
4
8
12
km
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E3 HAAT AND CONTOUR TABULATION

N. Lat. = 360027.0 W. Lng. = 1150024.0
HAAT and Distance to Contour
FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

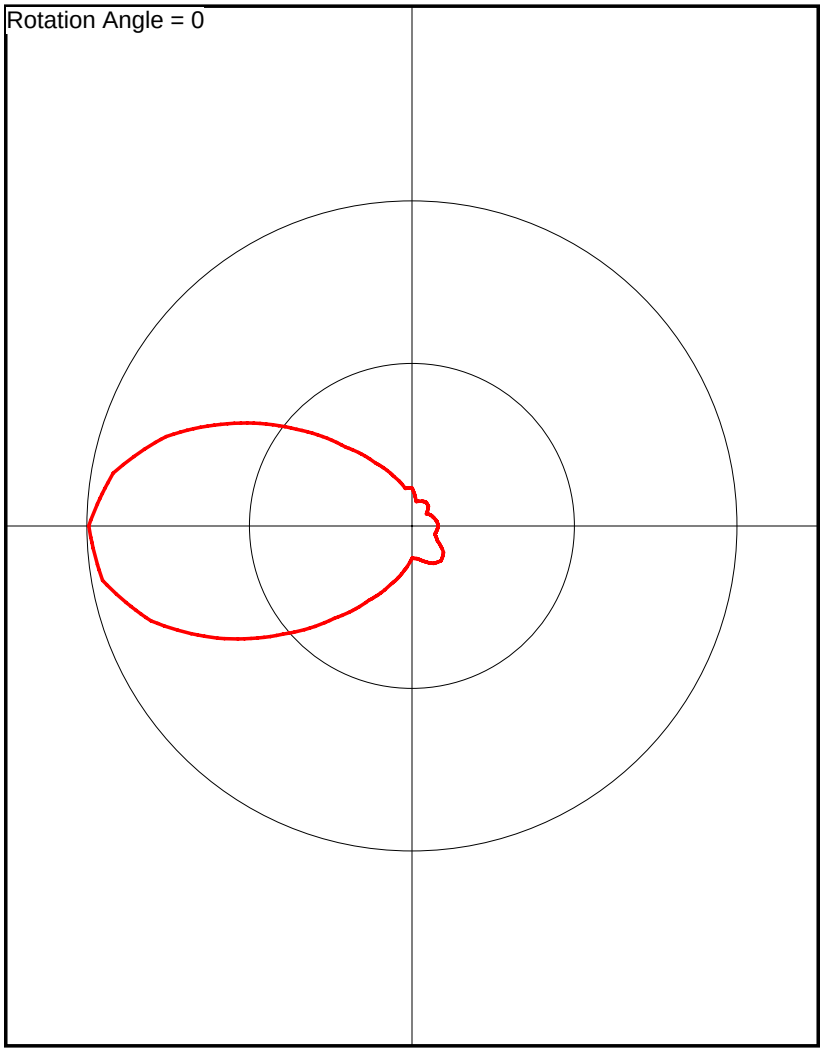
Azi.	AV EL	HAAT	ERP kW	60-F5	54-F5
000	530.6	508.4	0.0030	8.70	13.31
030	514.3	524.7	0.0016	6.93	11.17
060	667.7	371.3	0.0010	5.29	8.57
090	780.6	258.4	0.0014	5.33	8.08
120	693.5	345.5	0.0018	6.37	9.89
150	695.9	343.1	0.0039	8.25	12.07
180	797.5	241.5	0.0022	5.88	8.72
210	1053.2	-14.2	0.0153	3.50	4.96
240	808.0	231.0	0.1047	15.83	22.50
270	690.2	348.8	0.2174	23.45	32.68
300	624.2	414.8	0.0876	20.36	28.48
330	552.3	486.7	0.0109	12.78	18.55

Ave El= 700.67 M HAAT= 338.33 M AMSL= 1039 M

E4 Antenna Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Effective Field
0.0	0.117
10.0	0.076
20.0	0.081
30.0	0.085
40.0	0.079
50.0	0.058
60.0	0.067
70.0	0.072
80.0	0.078
90.0	0.081
100.0	0.078
110.0	0.075
120.0	0.090
130.0	0.127
140.0	0.140
150.0	0.133
160.0	0.117
170.0	0.102
180.0	0.099
190.0	0.140
200.0	0.192
210.0	0.264
220.0	0.371
230.0	0.518
240.0	0.690
250.0	0.854
260.0	0.966
270.0	0.994
280.0	0.933
290.0	0.804
300.0	0.631
310.0	0.462
320.0	0.316
330.0	0.223
340.0	0.162
350.0	0.117

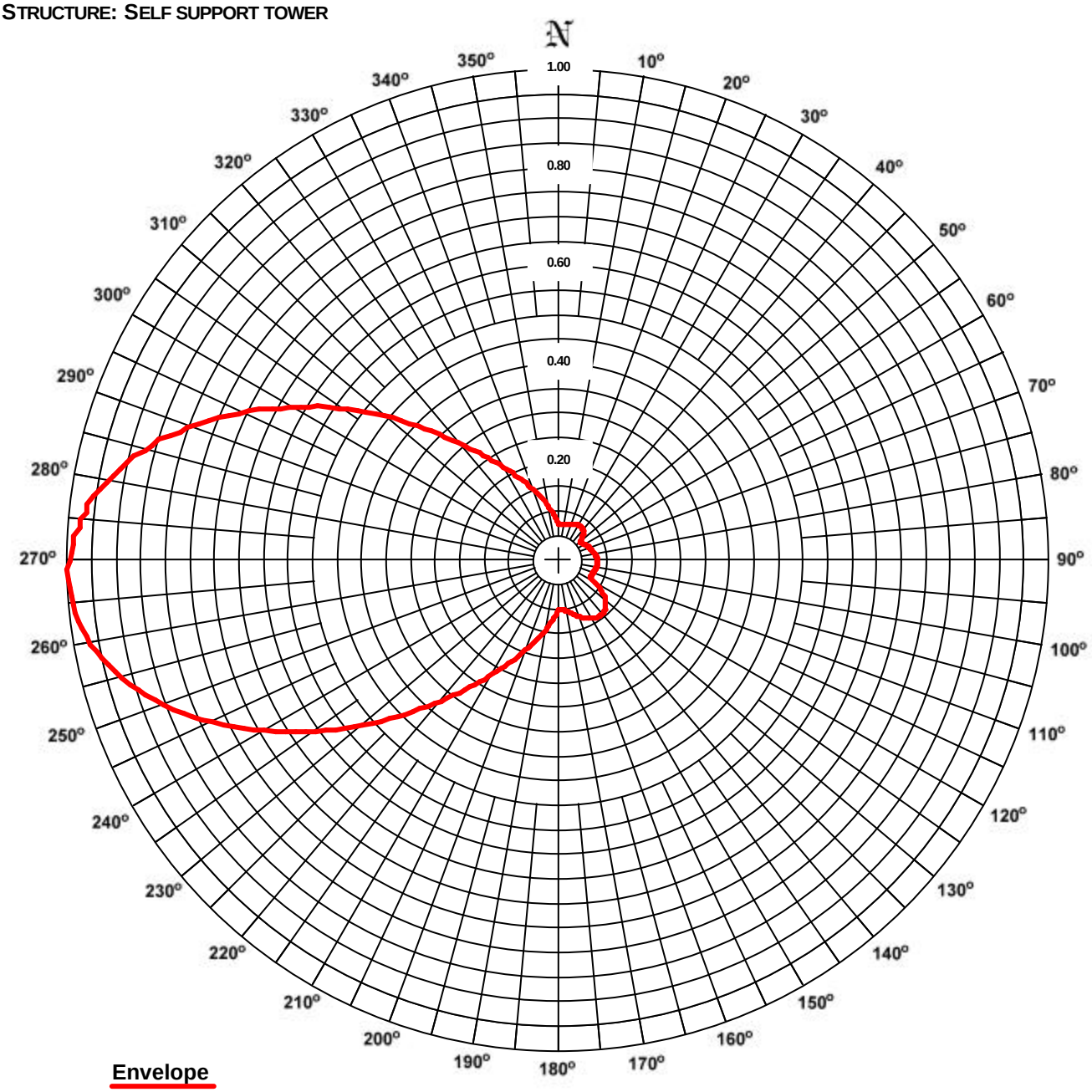


ERI® Horizontal Plane Relative Field Pattern

Electronics Research, Inc. 7777 Gardner Rd. Chandler, In 47610 Phone (812) 925-6000 Fax (812) 925-4030 http://www.eriinc.com/

FIGURE: 1
STATION: KHYZ
LOCATION: LAS VEGAS, NV
ANTENNA TYPE: 1091-1CP-DA
STRUCTURE: SELF SUPPORT TOWER

DATE: 9/30/2008
FREQUENCY: 99.7 MHZ
ORIENTATION: 268° TRUE
MOUNTING: CUSTOM



Envelope

RMS: 0.413
Maximum: 1.000 @ 268° True
Minimum: 0.058 @ 50° True

COMMENTS: COMPUTER GENERATED PATTERNS OF THE HORIZONTAL AND VERTICAL COMPONENTS.

Horizontal Plane Relative Field List

Electronics Research, Inc. 7777 Gardner Rd. Chandler, In 47610 Phone (812) 925-6000 Fax (812)

Station: KHYZ
Location: Las Vegas, NV
Frequency: 99.7 MHz

Antenna: 1091-1CP-DA
Orientation: 268° True
Tower: Self support tower

Figure: 1
Date: 9/5/2008
Reference: khyz2t.fig

Angle	Envelope			Polarization	Angle	Envelope			Polarization
	Field	kW	dBk			Field	kW	dBk	
0º	0.080	0.02	-17.63	H (and/or) V	180º	0.099	0.03	-15.76	H (and/or) V
5º	0.076	0.02	-18.09	H (and/or) V	185º	0.119	0.04	-14.18	H (and/or) V
10º	0.076	0.02	-18.09	H (and/or) V	190º	0.140	0.05	-12.75	H (and/or) V
15º	0.079	0.02	-17.79	H (and/or) V	195º	0.164	0.07	-11.39	H (and/or) V
20º	0.081	0.02	-17.49	H (and/or) V	200º	0.192	0.10	-10.04	H (and/or) V
25º	0.084	0.02	-17.19	H (and/or) V	205º	0.224	0.14	-8.67	H (and/or) V
30º	0.085	0.02	-17.09	H (and/or) V	210º	0.264	0.19	-7.25	H (and/or) V
35º	0.084	0.02	-17.19	H (and/or) V	215º	0.312	0.26	-5.79	H (and/or) V
40º	0.079	0.02	-17.69	H (and/or) V	220º	0.371	0.37	-4.30	H (and/or) V
45º	0.071	0.01	-18.69	H (and/or) V	225º	0.440	0.52	-2.82	H (and/or) V
50º	0.058	0.01	-20.40	H (and/or) V	230º	0.518	0.72	-1.40	H (and/or) V
55º	0.063	0.01	-19.63	H (and/or) V	235º	0.602	0.98	-0.09	H (and/or) V
60º	0.067	0.01	-19.18	H (and/or) V	240º	0.690	1.28	1.09	H (and/or) V
65º	0.069	0.01	-18.88	H (and/or) V	245º	0.776	1.62	2.11	H (and/or) V
70º	0.072	0.01	-18.59	H (and/or) V	250º	0.854	1.97	2.95	H (and/or) V
75º	0.074	0.01	-18.25	H (and/or) V	255º	0.920	2.28	3.59	H (and/or) V
80º	0.078	0.02	-17.89	H (and/or) V	260º	0.966	2.52	4.02	H (and/or) V
85º	0.080	0.02	-17.63	H (and/or) V	265º	0.992	2.66	4.25	H (and/or) V
90º	0.081	0.02	-17.54	H (and/or) V	270º	0.994	2.67	4.26	H (and/or) V
95º	0.080	0.02	-17.63	H (and/or) V	275º	0.977	2.58	4.11	H (and/or) V
100º	0.078	0.02	-17.83	H (and/or) V	280º	0.933	2.35	3.71	H (and/or) V
105º	0.076	0.02	-18.06	H (and/or) V	285º	0.871	2.05	3.11	H (and/or) V
110º	0.075	0.01	-18.24	H (and/or) V	290º	0.804	1.74	2.41	H (and/or) V
115º	0.073	0.01	-18.42	H (and/or) V	295º	0.716	1.38	1.41	H (and/or) V
120º	0.090	0.02	-16.59	H (and/or) V	300º	0.631	1.07	0.31	H (and/or) V
125º	0.111	0.03	-14.79	H (and/or) V	305º	0.543	0.80	-0.99	H (and/or) V
130º	0.127	0.04	-13.59	H (and/or) V	310º	0.462	0.58	-2.39	H (and/or) V
135º	0.136	0.05	-12.99	H (and/or) V	315º	0.385	0.40	-3.99	H (and/or) V
140º	0.140	0.05	-12.79	H (and/or) V	320º	0.316	0.27	-5.69	H (and/or) V
145º	0.140	0.05	-12.79	H (and/or) V	325º	0.264	0.19	-7.25	H (and/or) V
150º	0.133	0.05	-13.19	H (and/or) V	330º	0.223	0.13	-8.71	H (and/or) V
155º	0.126	0.04	-13.69	H (and/or) V	335º	0.190	0.10	-10.12	H (and/or) V
160º	0.117	0.04	-14.29	H (and/or) V	340º	0.162	0.07	-11.50	H (and/or) V
165º	0.110	0.03	-14.89	H (and/or) V	345º	0.138	0.05	-12.88	H (and/or) V
170º	0.102	0.03	-15.49	H (and/or) V	350º	0.117	0.04	-14.32	H (and/or) V
175º	0.099	0.03	-15.79	H (and/or) V	355º	0.098	0.03	-15.88	H (and/or) V

Polarization: **Envelope**
Maximum Field: **1.000 @ 268° True**
Minimum Field: **0.058 @ 50° True**
RMS: **0.413**
Maximum ERP: **2.700 kW**
Maximum Power Gain: **2.645 (4.225 dB)**

Total Input Power: 1.021 kW

ELECTRONICS RESEARCH,INC.
7777 GARDNER ROAD
CHANDLER, IN. 47610

FIGURE 3

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI TYPE 1091-1CP-DA ANTENNA
0 DEGREE BEAM TILT
0 PERCENT NULL FILL