



ENGINEERING STATEMENT
OF
BENJAMIN L. PIDEK, P.E.
IN SUPPORT OF AN APPLICATION FOR
CONSTRUCTION PERMIT FOR AN AUXILIARY STATION
KSHB-TV
KANSAS CITY, MO

Background

Scripps Media, Inc. (Scripps) is the licensee of KSHB-TV which is authorized to operate its post-transition DTV facility on Channel 42 (BLCDT-20110421AAQ) at Kansas City, MO, with an ERP of 730 kW at an HAAT of 323.7m. The tower is located at the following coordinates:

(NAD27)
38° 58' 42" N
94° 32' 01" W

Scripps, in the instant application, is applying for a construction permit for a KSHB Auxiliary DTV facility.

**PROVIDING COMMUNICATION
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Antenna System and Tower

Scripps proposes a KSHB Auxiliary DTV facility that would use the same site and tower as its main facility but operate from a side-mounted directional Dielectric TFU-30DSC-R 4C130 (antenna data and dBk table attached hereto) antenna rather than the top-mounted main antenna. The antenna is installed on the tower (ASR#1234587) and has a center-of-radiation of 562.2m AMSL. No modifications to the overall structure height are necessary; for that reason, neither notification to the FAA nor a change in the ASR is required.

ERP and Coverage

Scripps proposes to operate the KSHB Auxiliary DTV facility with and ERP of 1000 kW; the entire principal community of Kansas City, MO will be well within the predicted F(50,90) 48 dBu contour of this facility. Furthermore, as shown in Figure 1, attached hereto, the predicted noise-limited contour of the proposed auxiliary facility would not extend beyond the noise-limited contour of the licensed facility.

Environmental/RFR

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed facility is a multi-user site and it is assumed that the site is currently "in compliance" with FCC guidelines for human exposure to RFR (as defined in OET-65).

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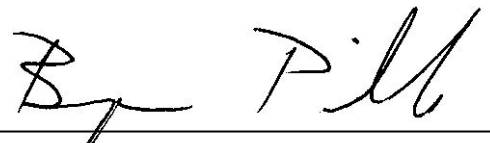
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The additional worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.012707 mW/cm², which is less than 5% of the MPE for public exposure (0.427333 mW/cm²) at Ch. 42 (638 MHz - 644 MHz). The contribution to the overall RFR from the proposed facility is negligible (less than 5%) and, therefore, the site will remain "in compliance" with FCC guidelines.

Scripps agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.



Benjamin L. Pidek, P.E.
December 21, 2012

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Mid-State Consultants

KSHB-TV
BLCDT20110421AAQ
Latitude: 38-58-42 N
Longitude: 094-32-01 W
ERP: 730.00 kW
Channel: 42
Frequency: 641.0 MHz
AMSL Height: 611.9 m
Horiz. Pattern: Omni

KSHB-TV (Aux)
Latitude: 38-58-42 N
Longitude: 094-32-01 W
ERP: 1000.00 kW
Channel: 42
Frequency: 641.0 MHz
AMSL Height: 562.2 m
Horiz. Pattern: Directional

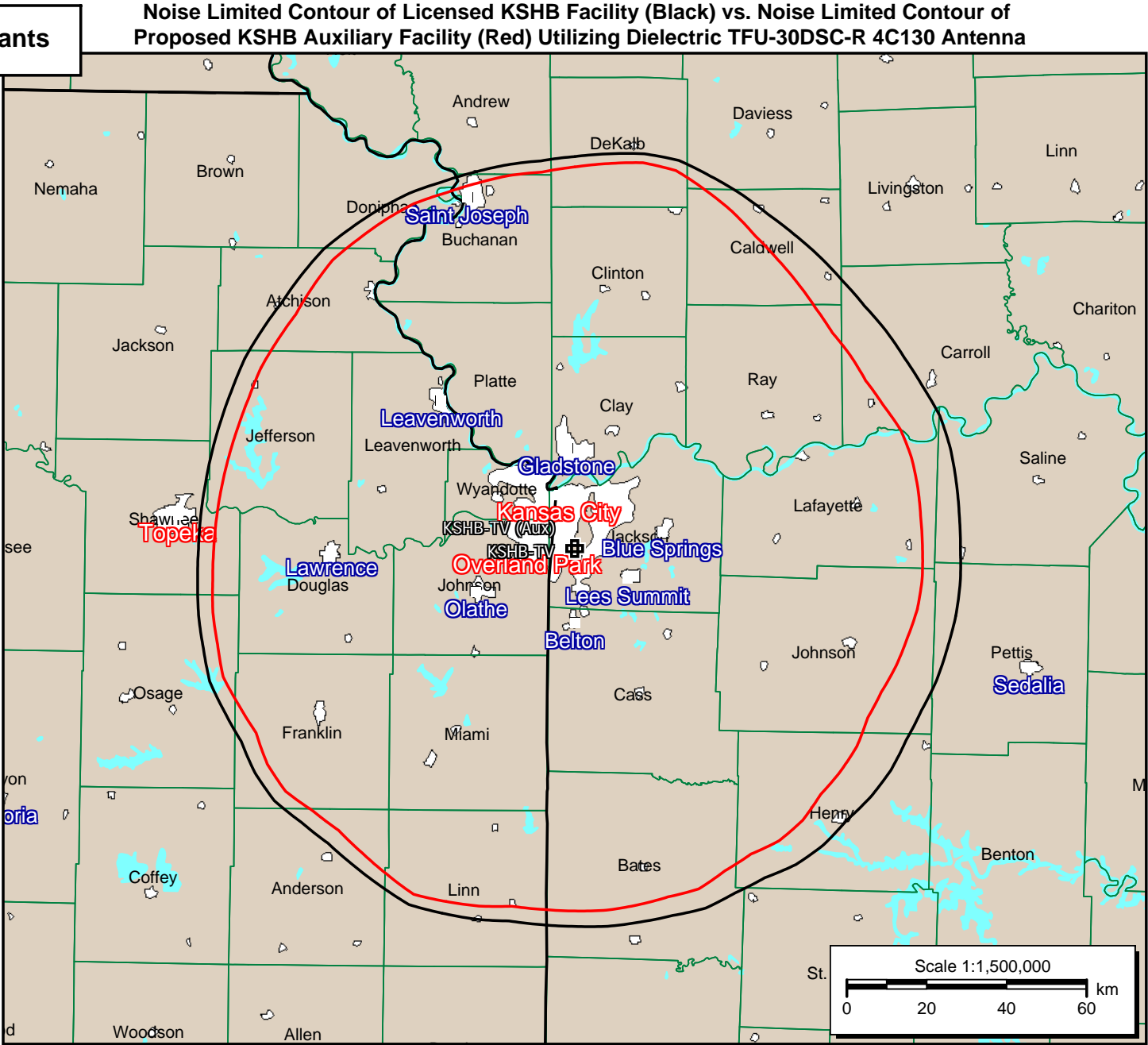
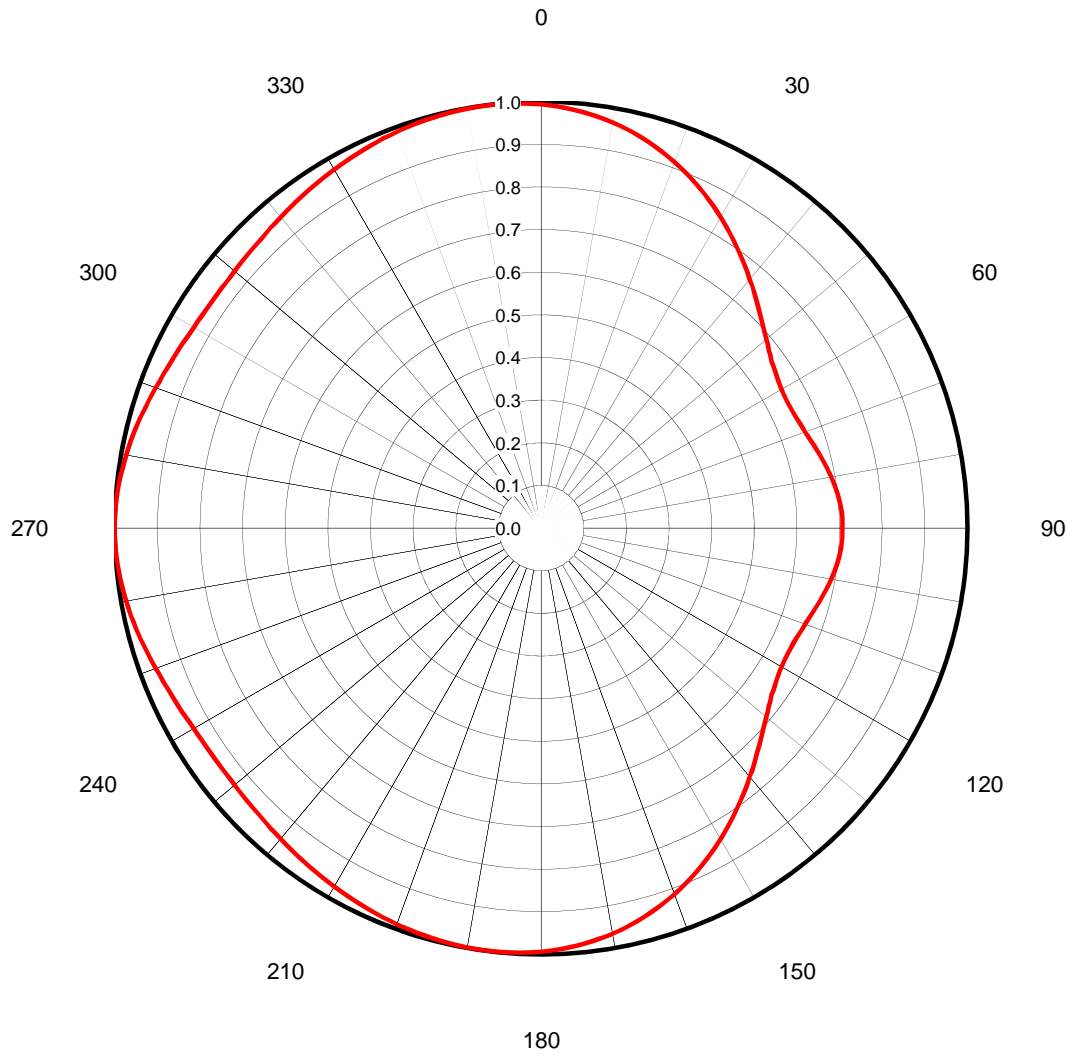


Figure 1
12-19-12

KSHB Auxiliary Facility Azimuth Pattern TFU-30DSC-R 4C130



Antenna Manufacturer: Dielectric

Model #: TFU-30DSC-R 4C130

Azimuth	RF	Azimuth	RF	Azimuth	RF	Azimuth	RF
0	0.994	90	0.707	180	0.994	270	1.000
10	0.966	100	0.691	190	0.999	280	0.988
20	0.914	110	0.659	200	0.989	290	0.962
30	0.842	120	0.651	210	0.971	300	0.941
40	0.761	130	0.689	220	0.951	310	0.938
50	0.689	140	0.761	230	0.938	320	0.951
60	0.651	150	0.842	240	0.941	330	0.971
70	0.659	160	0.914	250	0.962	340	0.989
80	0.691	170	0.966	260	0.988	350	0.999



Proposal Number

Date

30-Nov-12

Call Letters

KSHB-DT

Channel

42

Location

Kansas City, MO

Customer

Scripps-Howard Broadcasting

Antenna Type

TFU-30DSC-R 4C130 DC

ELEVATION PATTERN

RMS Gain at Main Lobe **22.00 (13.42 dB)**

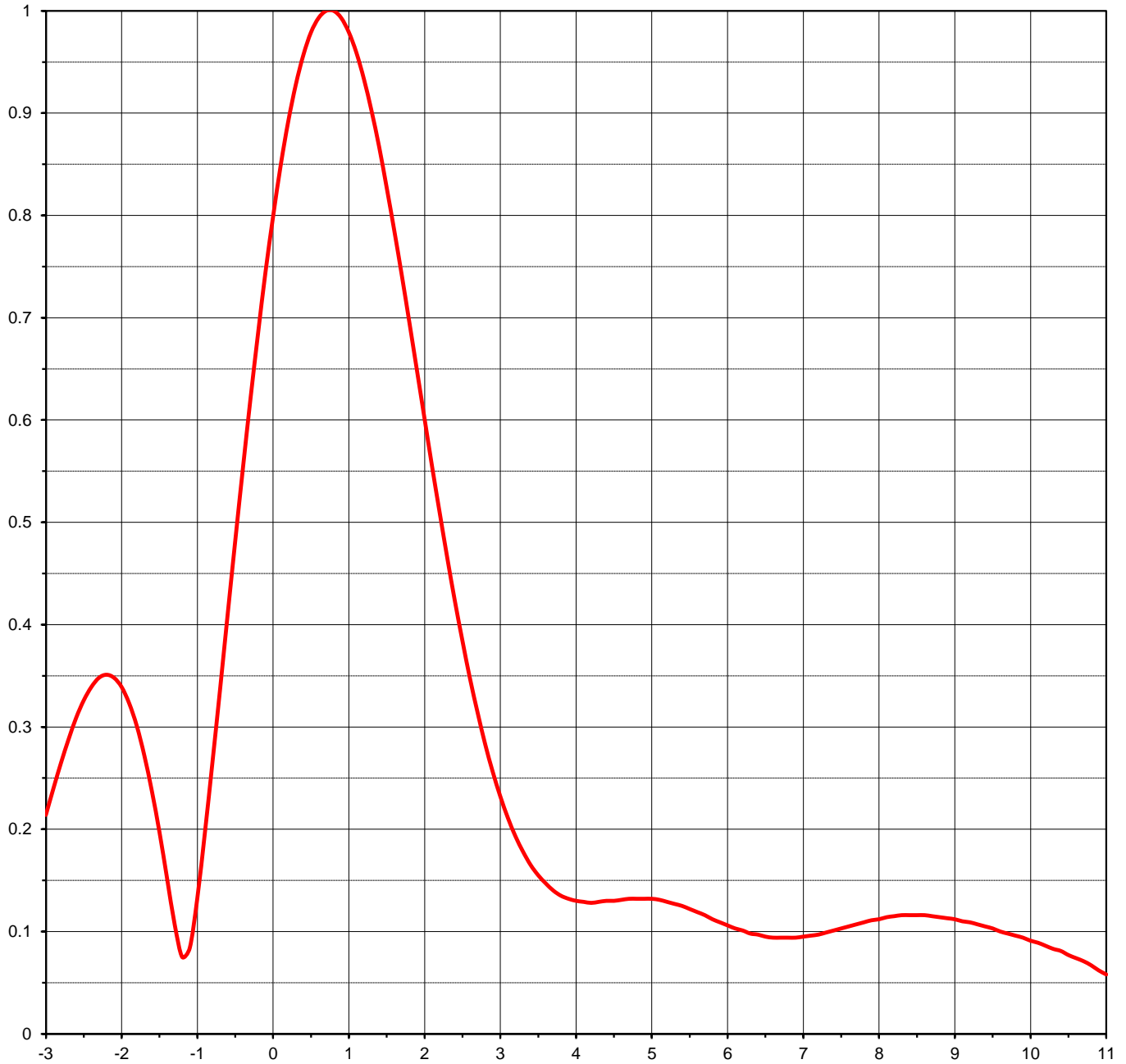
Beam Tilt **0.75 deg**

RMS Gain at Horizontal **14.00 (11.46 dB)**

Frequency **641.00 MHz**

Calculated / Measured **Calculated**

Drawing # **30Q220075D075**



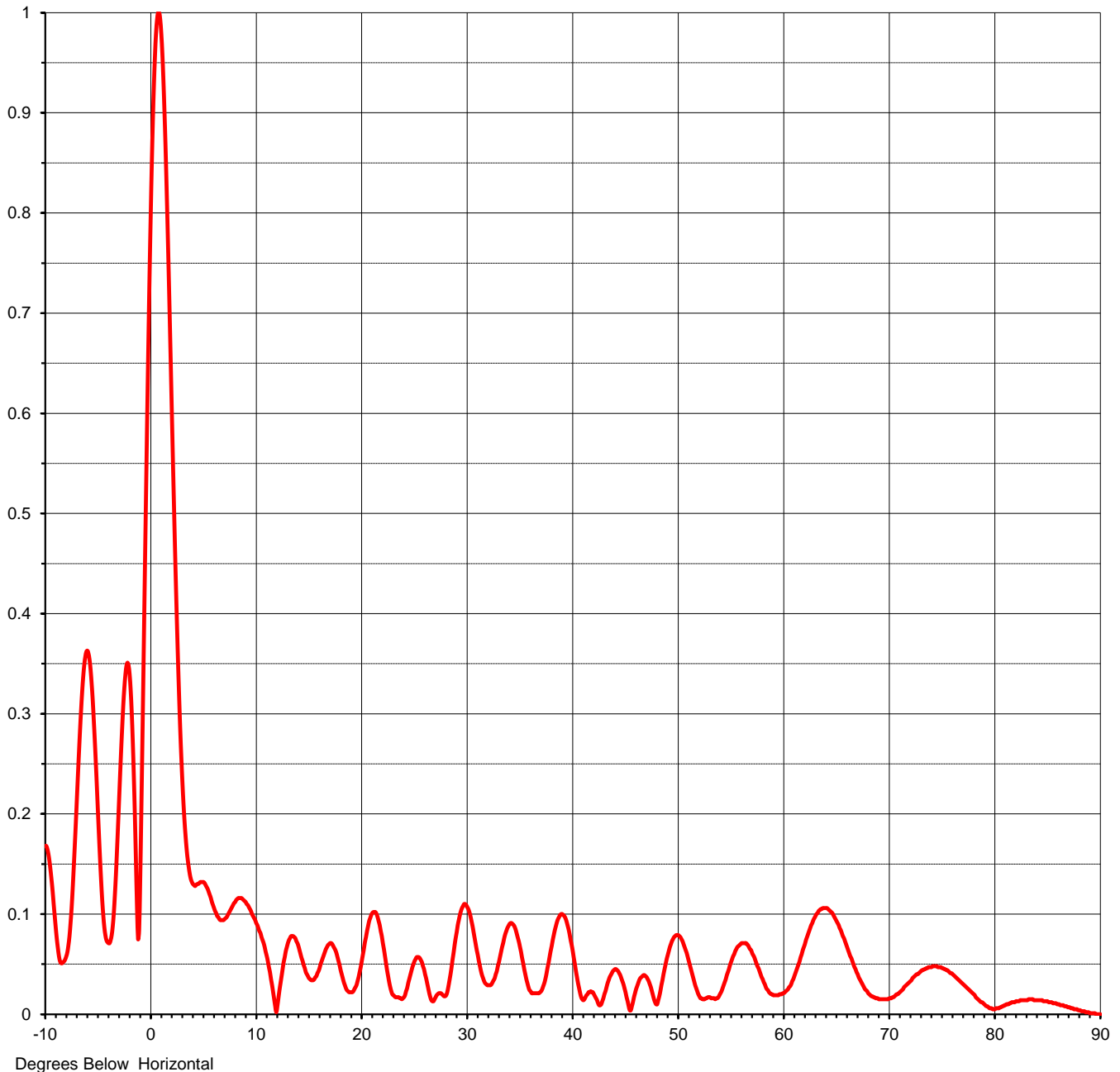
Degrees Below Horizontal



Proposal Number	C-x		
Date	30-Nov-12		
Call Letters	KSHB-DT	Channel	42
Location	Kansas City, MO		
Customer	Scripps-Howard Broadcasting		
Antenna Type	TFU-30DSC-R 4C130 DC		

ELEVATION PATTERN

RMS Gain at Main Lobe	22.00 (13.42 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	14.00 (11.46 dB)	Frequency	641.00 MHz
Calculated / Measured	Calculated	Drawing #	30Q220075D075-90





Proposal Number **C-x**
Date **30-Nov-12**
Call Letters **KSHB-DT** Channel **42**
Location **Kansas City, MO**
Customer **Scripps-Howard Broadcasting**
Antenna Type **TFU-30DSC-R 4C130 DC**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **30Q220075D075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.168	2.4	0.423	10.6	0.077	30.5	0.093	51.0	0.057	71.5	0.028
-9.5	0.144	2.6	0.347	10.8	0.071	31.0	0.064	51.5	0.037	72.0	0.033
-9.0	0.086	2.8	0.283	11.0	0.062	31.5	0.039	52.0	0.020	72.5	0.039
-8.5	0.051	3.0	0.232	11.5	0.035	32.0	0.029	52.5	0.015	73.0	0.043
-8.0	0.058	3.2	0.193	12.0	0.002	32.5	0.032	53.0	0.017	73.5	0.046
-7.5	0.106	3.4	0.165	12.5	0.038	33.0	0.048	53.5	0.016	74.0	0.047
-7.0	0.215	3.6	0.147	13.0	0.067	33.5	0.071	54.0	0.019	74.5	0.048
-6.5	0.322	3.8	0.135	13.5	0.078	34.0	0.088	54.5	0.032	75.0	0.046
-6.0	0.363	4.0	0.130	14.0	0.071	34.5	0.089	55.0	0.049	75.5	0.044
-5.5	0.314	4.2	0.128	14.5	0.053	35.0	0.072	55.5	0.063	76.0	0.040
-5.0	0.201	4.4	0.130	15.0	0.038	35.5	0.045	56.0	0.070	76.5	0.035
-4.5	0.099	4.6	0.131	15.5	0.034	36.0	0.024	56.5	0.071	77.0	0.030
-4.0	0.071	4.8	0.132	16.0	0.043	36.5	0.021	57.0	0.064	77.5	0.025
-3.5	0.101	5.0	0.132	16.5	0.059	37.0	0.022	57.5	0.051	78.0	0.020
-3.0	0.214	5.2	0.129	17.0	0.070	37.5	0.035	58.0	0.037	78.5	0.014
-2.8	0.265	5.4	0.125	17.5	0.066	38.0	0.063	58.5	0.025	79.0	0.010
-2.6	0.309	5.6	0.119	18.0	0.049	38.5	0.088	59.0	0.020	79.5	0.006
-2.4	0.339	5.8	0.112	18.5	0.029	39.0	0.100	59.5	0.019	80.0	0.005
-2.2	0.351	6.0	0.106	19.0	0.022	39.5	0.093	60.0	0.021	80.5	0.007
-2.0	0.339	6.2	0.101	19.5	0.027	40.0	0.069	60.5	0.025	81.0	0.009
-1.8	0.301	6.4	0.097	20.0	0.047	40.5	0.037	61.0	0.035	81.5	0.011
-1.6	0.237	6.6	0.094	20.5	0.077	41.0	0.015	61.5	0.050	82.0	0.013
-1.4	0.152	6.8	0.094	21.0	0.099	41.5	0.020	62.0	0.067	82.5	0.014
-1.2	0.075	7.0	0.095	21.5	0.100	42.0	0.022	62.5	0.083	83.0	0.014
-1.0	0.133	7.2	0.097	22.0	0.078	42.5	0.011	63.0	0.096	83.5	0.015
-0.8	0.266	7.4	0.101	22.5	0.044	43.0	0.016	63.5	0.104	84.0	0.014
-0.6	0.410	7.6	0.105	23.0	0.020	43.5	0.034	64.0	0.106	84.5	0.014
-0.4	0.552	7.8	0.109	23.5	0.017	44.0	0.044	64.5	0.102	85.0	0.013
-0.2	0.684	8.0	0.112	24.0	0.016	44.5	0.041	65.0	0.093	85.5	0.011
0.0	0.799	8.2	0.115	24.5	0.031	45.0	0.026	65.5	0.081	86.0	0.010
0.2	0.892	8.4	0.116	25.0	0.050	45.5	0.004	66.0	0.067	86.5	0.009
0.4	0.957	8.6	0.116	25.5	0.057	46.0	0.021	66.5	0.053	87.0	0.007
0.6	0.993	8.8	0.114	26.0	0.045	46.5	0.036	67.0	0.040	87.5	0.005
0.8	1.000	9.0	0.112	26.5	0.021	47.0	0.038	67.5	0.029	88.0	0.004
1.0	0.979	9.2	0.109	27.0	0.015	47.5	0.027	68.0	0.021	88.5	0.003
1.2	0.933	9.4	0.105	27.5	0.021	48.0	0.010	68.5	0.017	89.0	0.001
1.4	0.867	9.6	0.100	28.0	0.018	48.5	0.029	69.0	0.015	89.5	0.001
1.6	0.785	9.8	0.098	28.5	0.039	49.0	0.055	69.5	0.015	90.0	0.000
1.8	0.695	10.0	0.094	29.0	0.076	49.5	0.073	70.0	0.016		
2.0	0.601	10.2	0.089	29.5	0.103	50.0	0.079	70.5	0.018		
2.2	0.509	10.4	0.083	30.0	0.109	50.5	0.073	71.0	0.022		

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DIRECTIONAL ANTENNA DATA
KSHB-TV Auxiliary
dBk Table

Actual Bearing	Pattern Azimuth	Relative Field	ERP (dBk)	CONTOURS(km)	
				48 dBu	41 dBu
N000E	0.00	0.994	29.95	82.4	95.4
	10.00	0.966	29.70		
	20.00	0.914	29.22		
	30.00	0.842	28.51		
	40.00	0.761	27.63		
N045E	45.00	0.723	27.18	74.9	85.1
	50.00	0.689	26.76		
	60.00	0.651	26.27		
	70.00	0.659	26.38		
	80.00	0.691	26.79		
N090E	90.00	0.707	26.99	76.1	86.9
	100.00	0.691	26.79		
	110.00	0.659	26.38		
	120.00	0.651	26.27		
	130.00	0.689	26.76		
N135E	135.00	0.723	27.18	76.0	86.9
	140.00	0.761	27.63		
	150.00	0.842	28.51		
	160.00	0.914	29.22		
	170.00	0.966	29.70		
N180E	180.00	0.994	29.95	78.3	90.5
	190.00	0.999	29.99		
	200.00	0.989	29.90		
	210.00	0.971	29.74		
	220.00	0.951	29.56		
N225E	225.00	0.943	29.49	79.9	92.6
	230.00	0.938	29.44		
	240.00	0.941	29.47		
	250.00	0.962	29.66		
	260.00	0.988	29.90		
N270E	270.00	1.000	30.00	78.1	90.3
	280.00	0.988	29.90		
	290.00	0.962	29.66		
	300.00	0.941	29.47		
	310.00	0.938	29.44		
N315E	315.00	0.943	29.49	80.0	92.7
	320.00	0.951	29.56		
	330.00	0.971	29.74		
	340.00	0.989	29.90		
	350.00	0.999	29.99		

Maximum: N270E 30.0 dBk

Minima: N060E 26.27 dBk
N120E