

Engineering Statement

prepared for

Estes Broadcasting, Inc.

KCEB(TV) Longview, Texas

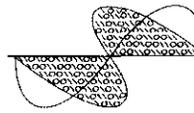
Facility ID 83913

This engineering statement has been prepared on behalf of *Estes Broadcasting, Inc.* (“*Estes*”), licensee of KCEB(TV) (Facility ID 83913, Longview, TX) in support of a *Petition for Rulemaking* to change the KCEB digital television (“DTV”) post-transition channel assignment and related technical parameters. KCEB has been assigned Channel 38 for the post-transition period, as established in Appendix B of the Seventh Report and Order in MB Docket 87-278. *Estes* requests an alternative channel assignment and related parameters for KCEB. The instant proposal is intended to be filed by June 20, 2008 in response to the FCC’s lifting of the August 3, 2004 “freeze” concerning expansion in service area and channel change petitions.¹

The licensed KCEB analog facility is on Channel 54 (BLCT-20030721ABN). KCEB is a “singleton” facility authorized after April 3, 1997 and therefore does not have a companion digital channel. Further, KCEB’s analog Channel 54 is not in the core (Ch. 2-51) and cannot be employed for post-transition digital operation. KCEB is authorized to flash-cut directly to digital operation on Channel 38 pursuant to a Construction Permit (BPCDT-20070510ABZ). The Appendix B parameters for KCEB also specify Channel 38.

The KCEB digital Channel 38 operation (CP and Appendix B) would employ a side-mounted transmitting antenna on a tower structure also employed by station KFXK(TV) (Facility ID 70917, Longview, TX). KFXK is analog Channel 51 and digital Channel 31, and will remain on Channel 31 post-transition. The KFXK Channel 51 analog antenna is top-mounted on the tower structure and would no longer be needed under the current allotment table, while a new Channel 38 antenna would have to be added to the tower for KCEB (either side-mount or as a replacement top-mount).

¹Public Notice “*Commission Lifts the Freeze On the Filing of Maximization Applications and Petitions for Digital Channel Substitutions, Effective Immediately*” DA 08-1213, released May 30, 2008.



In order to eliminate the need for any antenna work on the tower, *Estes* proposes herein to change KCEB’s post-transition digital allotment to Channel 51 and employ the existing Channel 51 antenna system. The proposal also would change other technical parameters for KCEB to correspond to the top-mount antenna location and the KFXK directional antenna pattern, as summarized below.

Present Channel 38 Parameters (Appendix B)

Facility ID	State and City		NTSC	DTV								
				Chan	Chan	ERP (kW)	HAAT (m)	Antenna ID	Latitude (DDMMSS)	Longitude (DDMMSS)	Area (sq km)	Population (thous)
83913	TX	LONGVIEW	38	38	191	268	74771	321536	945702	15446	554	0.3

Antenna C/R AMSL: 404 meters

Proposed Channel 51 Parameters²

Facility ID	State and City		NTSC	DTV								
				Chan	Chan	ERP (kW)	HAAT (m)	Antenna ID	Latitude (DDMMSS)	Longitude (DDMMSS)	Area (sq km)	Population (thous)
83913	TX	LONGVIEW	38	51	940	377	20557	321536	945702	25513	711	0.0

Antenna C/R AMSL: 514 meters

The proposed Antenna ID corresponds to the licensed KFXK analog Channel 51 directional antenna (see pattern data at **Figure 1**). The proposed ERP of 940 kW does not exceed the maximum effective radiated power permitted by §73.622(f)(8)(i) for the 377 meter antenna height above average terrain

A map is supplied as **Figure 2**, which depicts the standard predicted coverage contours. This map includes the boundaries of Longview, KCEB’s principal community. As demonstrated thereon,

² The proposed coordinates, antenna height above average terrain, and antenna height above mean sea level vary slightly from the KFXK Channel 51 licensed values to conform to Antenna Structure Registration data regarding the site location and elevation (ASR #1047436).

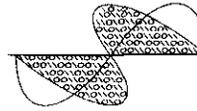
the proposed facility complies with §73.625(a)(1), as the entire principal community will be encompassed by the 48 dBμ contour.

Figure 3 provides a coverage contour comparison, demonstrating that the channel substitution would not result in any loss area from the current Channel 38 allotment. The proposed KCEB-DT allotment's predicted service population provides a 128 percent match of the current Appendix B facility, as detailed in the following table.

Population Summary (2000 Census) OET Bulletin 69 method	Channel 38 Appendix B	Channel 51 Proposed
Within Noise Limited Contour	556,291	711,421
Not affected by terrain losses	555,941	710,628
Lost to all interference	1,837	0
Net DTV Service	554,104	710,628
Match of Appendix B	---	128.25%

A detailed interference study per OET Bulletin 69³ shows that the proposal complies with the 0.5 percent limit of new interference caused to the Appendix B facilities and current post-transition authorizations of pertinent nearby stations. The interference study output report is provided as **Table 1**. Protection requirements towards authorized Class A stations are also satisfied.

³FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A standard cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.



Certification

The undersigned hereby certifies that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief.

Joseph M. Davis, P.E.
June 7, 2008

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Manassas, VA 20112
703-650-9600

List of Attachments

- | | |
|----------|------------------------------------|
| Figure 1 | Antenna Pattern Data |
| Figure 2 | Proposed Coverage Contours |
| Figure 3 | Coverage Contour Comparison |
| Table 1 | OET Bulletin 69 Interference Study |



Relative Field Values

http://fjallfoss.fcc.gov/cgi-bin/ws.exe/prod/cdbs/pubacc/prod/ant_detail...Polar Plot

<http://www.fcc.gov/cgi-bin/polarplot?temp=20557&rotate=0&p0=0.93...>



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Relative Field Values

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Antenna Make	Model	Service	Antenna Id
RCA	TFU-30JDAS (SPECIAL)	TV	20557

Antenna relative field values:

0° 0.93	10° 1	20° 0.99	30° 0.91	40° 0.74	50° 0.5
60° 0.3	70° 0.33	80° 0.54	90° 0.64	100° 0.6	110° 0.46
120° 0.31	130° 0.44	140° 0.78	150° 0.93	160° 1	170° 0.99
180° 0.91	190° 0.75	200° 0.53	210° 0.33	220° 0.21	230° 0.2
240° 0.22	250° 0.24	260° 0.27	270° 0.29	280° 0.3	290° 0.3
300° 0.28	310° 0.22	320° 0.32	330° 0.48	340° 0.66	350° 0.81

Additional Azimuths:

[Relative Field Polar Plot](#)

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Federal Communications Commission
445 12th Street SW
Washington, DC 20554
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Phone: 1-888-CALL-FCC (1-888-225-5322)
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Any specified rotation has already been applied to the plotted pattern. Field strength values shown on a rotated pattern may differ from the listed values because intermediate azimuths are interpolated between entered azimuths.

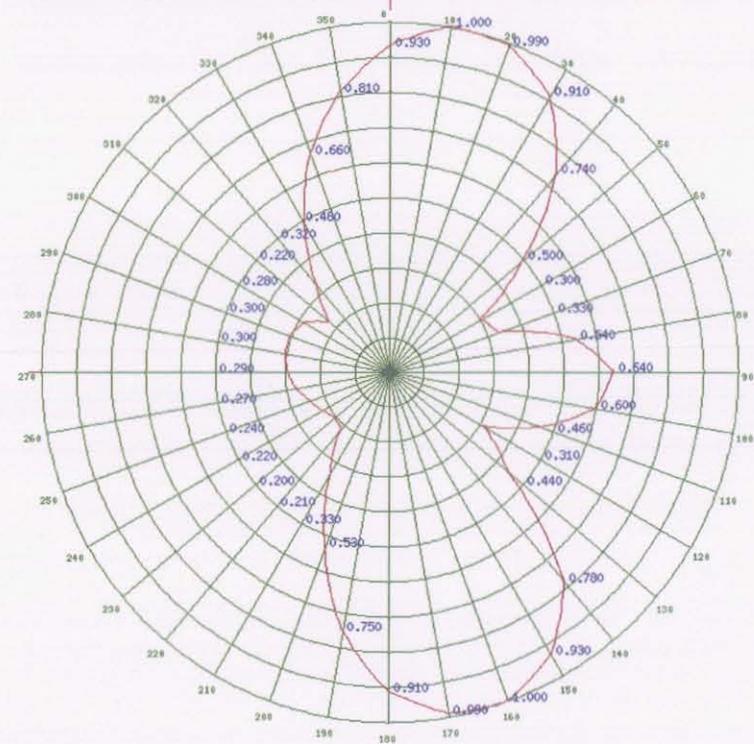
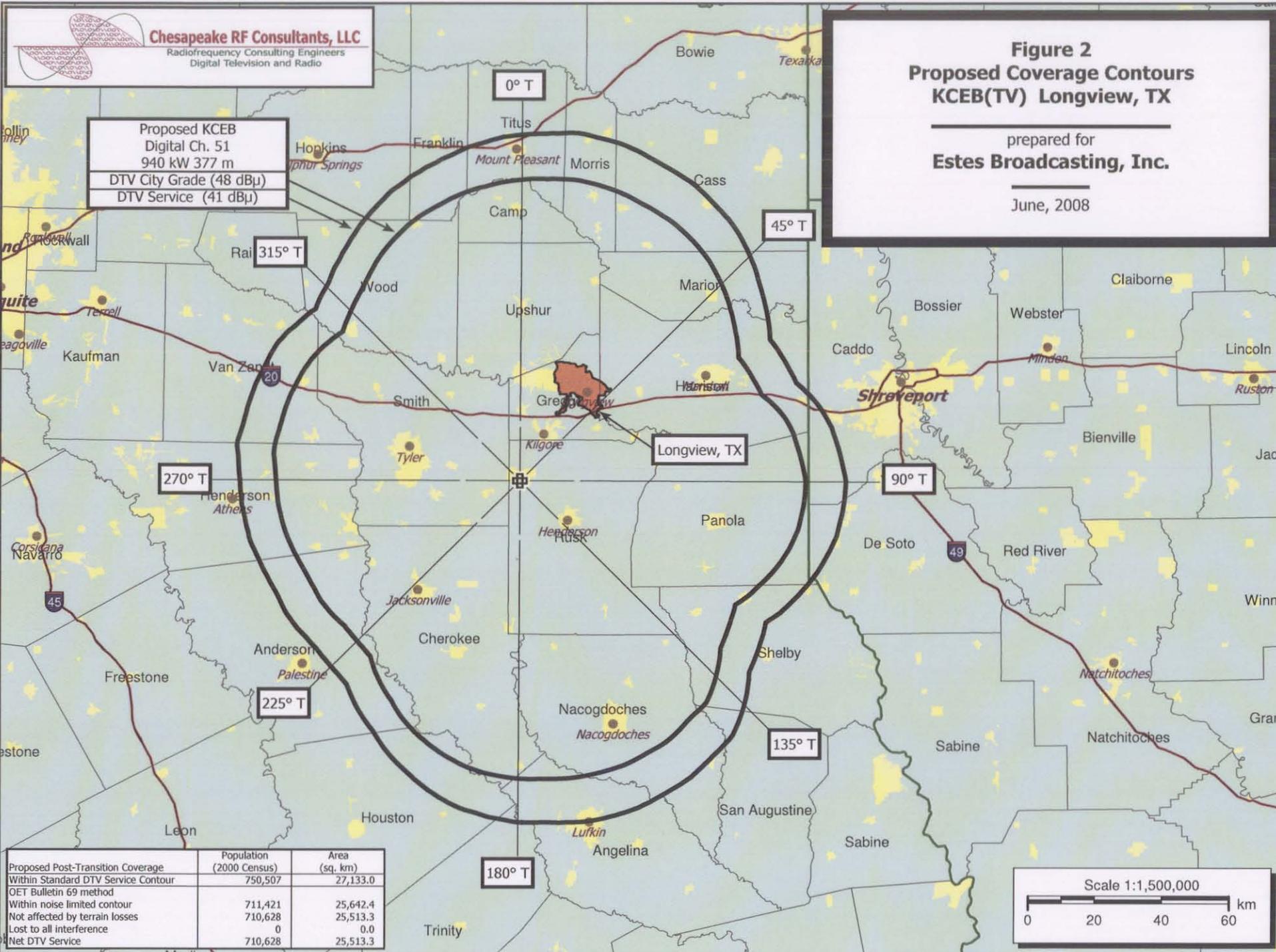
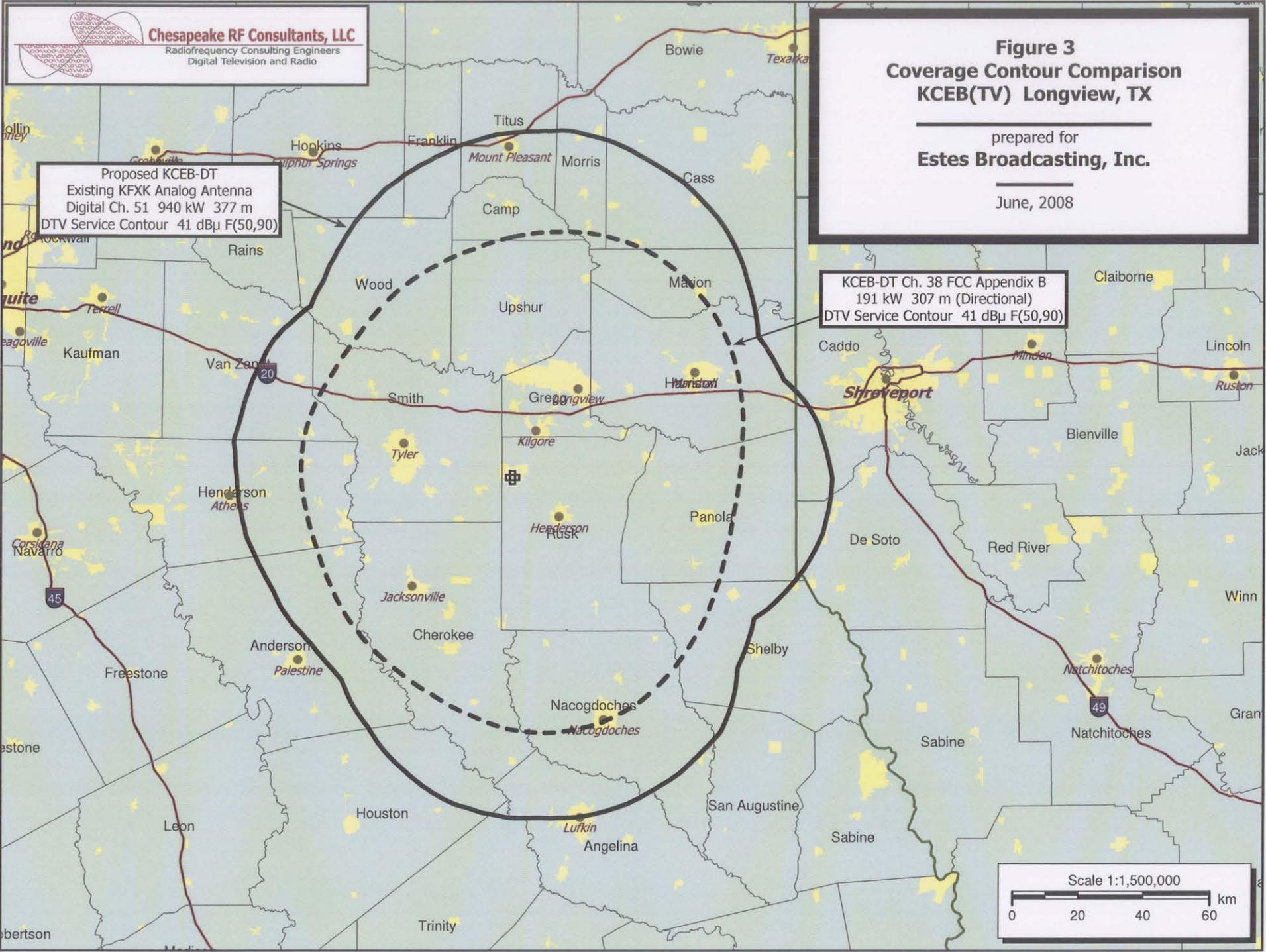


Figure 1
Directional Antenna Data
Antenna ID #20557
KCEB(TV) Longview, TX

prepared for
Estes Broadcasting, Inc.

June, 2008





Chesapeake RF Consultants, LLC
 Radiofrequency Consulting Engineers
 Digital Television and Radio

Figure 3
Coverage Contour Comparison
KCEB(TV) Longview, TX
 prepared for
Estes Broadcasting, Inc.
 June, 2008

Proposed KCEB-DT
 Existing KFXK Analog Antenna
 Digital Ch. 51 940 kW 377 m
 DTV Service Contour 41 dBμ F(50,90)

KCEB-DT Ch. 38 FCC Appendix B
 191 kW 307 m (Directional)
 DTV Service Contour 41 dBμ F(50,90)

Scale 1:1,500,000
 0 20 40 60 km

Table 1 KCEB-DT OET Bulletin 69 Interference Study
(page 1 of 4)

TW Census data selected 2000
Post Transition Data Base Selected /space/software/cdbs/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-07-2008 Time: 11:30:26

Record Selected for Analysis

KCEBDT USERRECORD-01 LONGVIEW TX US
Channel 51 ERP 940. kW HAAT 378. m RCAMS1 00514 m
Latitude 032-15-36 Longitude 0094-57-02
Status APP Zone 2 Border
Dir Antenna Make CDB Model 00000000020557 Beam tilt N Ref Azimuth 0.

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	813.006	395.5	103.7
45.0	361.336	381.3	95.6
90.0	385.024	390.1	96.7
135.0	349.774	368.4	94.4
180.0	778.414	383.8	102.3
225.0	39.503	367.8	78.8
270.0	79.054	365.9	83.3
315.0	68.526	367.8	82.5

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
51	KCEBDT	LONGVIEW TX	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Table 1 KCEB-DT OET Bulletin 69 Interference Study
(page 2 of 4)

50	KBXS-CA	SHREVEPORT LA	116.2	LIC	BLTTA	-20030718ADM
50	KBTX-TV	BRYAN TX	215.5	CP MOD	BMPCDT	-20080228ABF
50	KBTX-TV	BRYAN TX	215.5	PLN	DTVPLN	-DTV1779
51	WWJX	JACKSON MS	427.3	CP MOD	BPCDT	-20080312ABI
51	WWJX	JACKSON MS	427.3	PLN	DTVPLN	-DTV1800
51	KBVO-CA	AUSTIN TX	345.6	LIC	BLTTA	-20020405ABE

Analysis of Interference to Affected Station 1

Channel	Call	City/State	Application Ref. No.
50	KBXS-CA	SHREVEPORT LA	BLTTA -20030718ADM

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
49	KKYK-DT	CAMDEN AR	128.8	CP	BPCDT -20050224ABE
49	KKYK-DT	CAMDEN AR	128.9	PLN	DTVPLN -DTV1728
49	KKYK-DT	CAMDEN AR	128.9	LIC	BLCT -20000412ADA
50	KSOEK	EL DORADO AR	128.9	LIC	BLTTL -20001130ABL
50	KTSS-LF	HOPE AR	128.4	LIC	BLTTL -20020311AAR
50	NEW	NEW IBERIA LA	344.4	LIC	BPRM -20020308ABY
50	KLWB	NEW IBERIA LA	294.2	PLN	DTVPLN -DTV1767
50	KLWB	NEW IBERIA LA	294.2	CP	BPCDT -20080502AAH
50	KLWB	NEW IBERIA LA	294.2	LIC	BLCT -20060316ACO
50	KBTX-TV	BRYAN TX	306.8	CP MOD	BMPCDT -20080228ABF
50	KBTX-TV	BRYAN TX	306.8	PLN	DTVPLN -DTV1779
51	KFXK	LONGVIEW TX	116.2	LIC	BLCT -19910904KE
54	KCEB	LONGVIEW TX	100.6	LIC	BLCT -20030721ABN
51	KCEBDT	LONGVIEW TX	116.2	APP	USERRECORD-01

Proposal causes no interference

Analysis of Interference to Affected Station 2

Channel	Call	City/State	Application Ref. No.
50	KBTX-TV	BRYAN TX	BMPCDT -20080228ABF

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
49	KNVA	AUSTIN TX	171.4	LIC	BLCDT -20060721ABF
49	KNVA	AUSTIN TX	171.4	PLN	DTVPLN -DTV1752
49	KNVA	AUSTIN TX	171.4	CP MOD	BMPCDT -20060623AAC
50	KLWB	NEW IBERIA LA	389.3	PLN	DTVPLN -DTV1767
50	KLWB	NEW IBERIA LA	389.3	CP	BPCDT -20080502AAH
51	KCEBDT	LONGVIEW TX	215.5	APP	USERRECORD-01

Proposal causes no interference

Analysis of Interference to Affected Station 3

Channel	Call	City/State	Application Ref. No.
50	KBTX-TV	BRYAN TX	DTVPLN -DTV1779

Table 1 KCEB-DT OET Bulletin 69 Interference Study

(page 3 of 4)

Stations Potentially Affecting This Station

Char.	Call	City/State	Dist(km)	Status	Application	Ref. No.
49	KNVA	AUSTIN TX	171.4	LIC	BLCDF	-20060721ABF
49	KNVA	AUSTIN TX	171.4	PLN	DTVPLN	-DTVP1752
49	KNVA	AUSTIN TX	171.4	CP MOD	BMPCDF	-20060623AAC
50	KLWB	NEW IBERIA LA	389.3	PLN	DTVPLN	-DTVP1767
50	KLWB	NEW IBERIA LA	389.3	CP	BPCDF	-20080502AAH
51	KCEBDT	LONGVIEW TX	215.5	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
51	WWJX	JACKSON MS	BPCDF	-20080312ABI

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
51	WPXX-TV	MEMPHIS TN	334.7	LIC	BLCDF	-20020430ACC
51	WPXX-TV	MEMPHIS TN	334.7	PLN	DTVPLN	-DTVP1813
51	KCEBDT	LONGVIEW TX	427.3	APP	USERRECORD-01	

Proposed station is beyond the site to nearest cell evaluation distance

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
51	WWJX	JACKSON MS	DTVPLN	-DTVP1800

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
51	WPXX-TV	MEMPHIS TN	334.7	LIC	BLCDF	-20020430ACC
51	WPXX-TV	MEMPHIS TN	334.7	PLN	DTVPLN	-DTVP1813
51	KCEBDT	LONGVIEW TX	427.3	APP	USERRECORD-01	

Proposed station is beyond the site to nearest cell evaluation distance

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Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
51	KBVO-CA	AUSTIN TX	BLTTA	-20020405ABE

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
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Table 1 KCEB-DT OET Bulletin 69 Interference Study

(page 4 of 4)

43	KEYE-TV	AUSTIN TX	0.6	LIC	BLCDF	-20031001BGN
43	KEYE-TV	AUSTIN TX	0.6	PLN	DTVPLN	-DTVP1556
44	KWKT	WACO TX	118.8	LIC	BLCT	-20050314AFV
44	KWKT	WACO TX	118.8	PLN	DTVPLN	-DTVP1595
44	KWKT	WACO TX	118.8	CP	BPCDF	-20080519ABE
48	WOAI-TV	SAN ANTONIO TX	125.7	APP	BPCDF	-20080304AAH
48	WOAI-TV	SAN ANTONIO TX	125.7	PLN	DTVPLN	-DTVP1723
49	KNVA	AUSTIN TX	3.0	LIC	BLCDF	-20060721ABF
49	KNVA	AUSTIN TX	0.0	PLN	DTVPLN	-DTVP1752
49	KNVA	AUSTIN TX	0.0	CP MOD	BMPCDF	-20060623AAC
51	KNWS-TV	KATY TX	237.1	LIC	BLCT	-19931104KE
51	KFKK	LONGVIEW TX	345.5	LIC	BLCT	-19910904KE
51	KTJA-CA	VICTORIA TX	189.9	APP	BSTA	-20060208ABG
51	KCEBDT	LONGVIEW TX	345.6	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
51	KCEBDT	LONGVIEW TX	USERRECORD-01	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
50	KBTX-TV	BRYAN TX	215.5	CP MOD	BMPCDF	-20080228ABF
50	KBTX-TV	BRYAN TX	215.5	PLN	DTVPLN	-DTVP1779
51	WWJX	JACKSON MS	427.3	CP MOD	BPCDF	-20080312ABI
51	WWJX	JACKSON MS	427.3	PLN	DTVPLN	-DTVP1800

Total scenarios = 1

Result key: 1

Scenario 1 Affected station 7
Before Analysis

Results for: 51A TX LONGVIEW USERRECORD01 APP

HAAT	378.0 m, ATV ERP	940.0 kW	POPULATION	AREA (sq km)
			711421	25642.4
			710628	25513.3
within Noise Limited Contour				
not affected by terrain losses				
lost to NTSC IX			0	0.0
lost to additional IX by ATV			0	0.0
lost to ATV IX only			0	0.0
lost to all IX			0	0.0

Potential Interfering Stations Included in above Scenario 1

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED