

INTRODUCTION

This technical report is submitted as part of the auction filing window for AM broadcasters (AU Docket No. 17-143). Wilson County Broadcasting, Inc., licensee for WKDA-AM, facility 71289, is seeking FM channel 270 at Lebanon, TN. for the associated translator.

Exhibit E-1 includes overlap studies which show that the proposal complies with all Commission rules and policies. The proposed 60 dBu contour lies entirely within the 2 mV/m contour of WKDA.

R.F. EXPOSURE

The RF contribution as calculated using the formula from OET Bulletin 65 shows a worst case RF factor is calculated to be 4.4 $\mu\text{W}/\text{cm}^2$ well below the 200 $\mu\text{W}/\text{cm}^2$ maximum permissible exposure for general public exposure. In addition, as shown by the attached aerial photograph, access to the property is marked and controlled as an existing broadcast facility. All tower maintenance is controlled and transmitters turned off as required during maintenance.

The tower is existing and no environmental issues are known.

Gary M. Brown

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07/25/2017

LEBANON FILL IN

REFERENCE
36 12 26.0 N.
86 16 03.0 W.

CH# 270D - 101.9 MHz, Pwr= 0.055 kW, HAAT= 27.4 M, COR= 215.6 M
Average Protected F(50-50)= 4.83 km
Omni-directional

DISPLAY DATES
DATA 07-19-17
SEARCH 07-20-17

CH CITY	CALL	TYPE ANT STATE	AZI --	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
271A Lafayette	WLCT	LIC _C_ TN	32.5 212.6	43.24 BMLH19990624KA	36 32 06.0 86 00 27.0	6.000 99	48.9 351	32.0 Lafayette Broadcasting Co.	-11.7*	2.5
270D Murfreesboro	W270AF	CP _C_ TN	195.3 15.2	42.24 BPFT20170505AAE	35 50 26.0 86 23 27.0	0.250	44.1 276	12.8 The Rutherford Group, Inc.	-6.6*	13.9
270D Nashville	W270BK	CP DC_ TN	296.9 116.6	52.25 BPFT20170626ABF	36 25 08.0 86 47 18.0	0.250	49.0 329	14.7 Wycq, Inc.	-3.6	16.0
270C1 Central City	WQXQ	LIC _CN KY	337.4 157.0	166.06 BLH19930826KA	37 35 03.0 86 59 29.0	100.000 204	162.2 346	64.1 Radio Active Media, Inc.	-3.1	78.6
270D Murfreesboro	W270AF	LIC _C_ TN	195.3 15.2	42.24 BLFT20151019AAL	35 50 26.0 86 23 27.0	0.250	37.3 248	11.0 The Rutherford Group, Inc.	0.1	15.6
269A Smithville	WJLE-FM	LIC _CN TN	127.8 308.1	50.95 BMLH19971229KB	35 55 31.0 85 49 14.0	4.400 59	36.1 349	23.4 Center Hill Broadcasting C	10.2	20.3
273C1 Pegram	WPRT-FM	LIC NCX TN	276.2 95.6	93.56 BLH20031124ASU	36 17 36.0 87 18 20.0	100.000 297	10.6 483	74.3 Wycq, Inc.	76.9	18.9
271D Nashville	W271AB	LIC _C_ TN	262.3 82.0	54.17 BLFT20091029AAW	36 08 27.0 86 51 56.0	0.145 246	28.2 421	18.9 Wycq, Inc.	20.6	28.2
268A Celina	WVFB	LIC _CN TN	56.5 236.9	71.02 BLH19940808KJ	36 33 28.0 85 36 15.0	6.000 100	2.8 334	28.5 Frank Keeton Aircasters, I	62.7	41.9
269A Columbia	WKOM	LIC _CN TN	227.0 46.6	95.71 BLH19970910KF	35 37 05.0 87 02 33.0	4.100 118	44.0 332	28.8 Middle Tennessee Broadcast	46.9	59.9

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding
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

LEBANON FILL IN

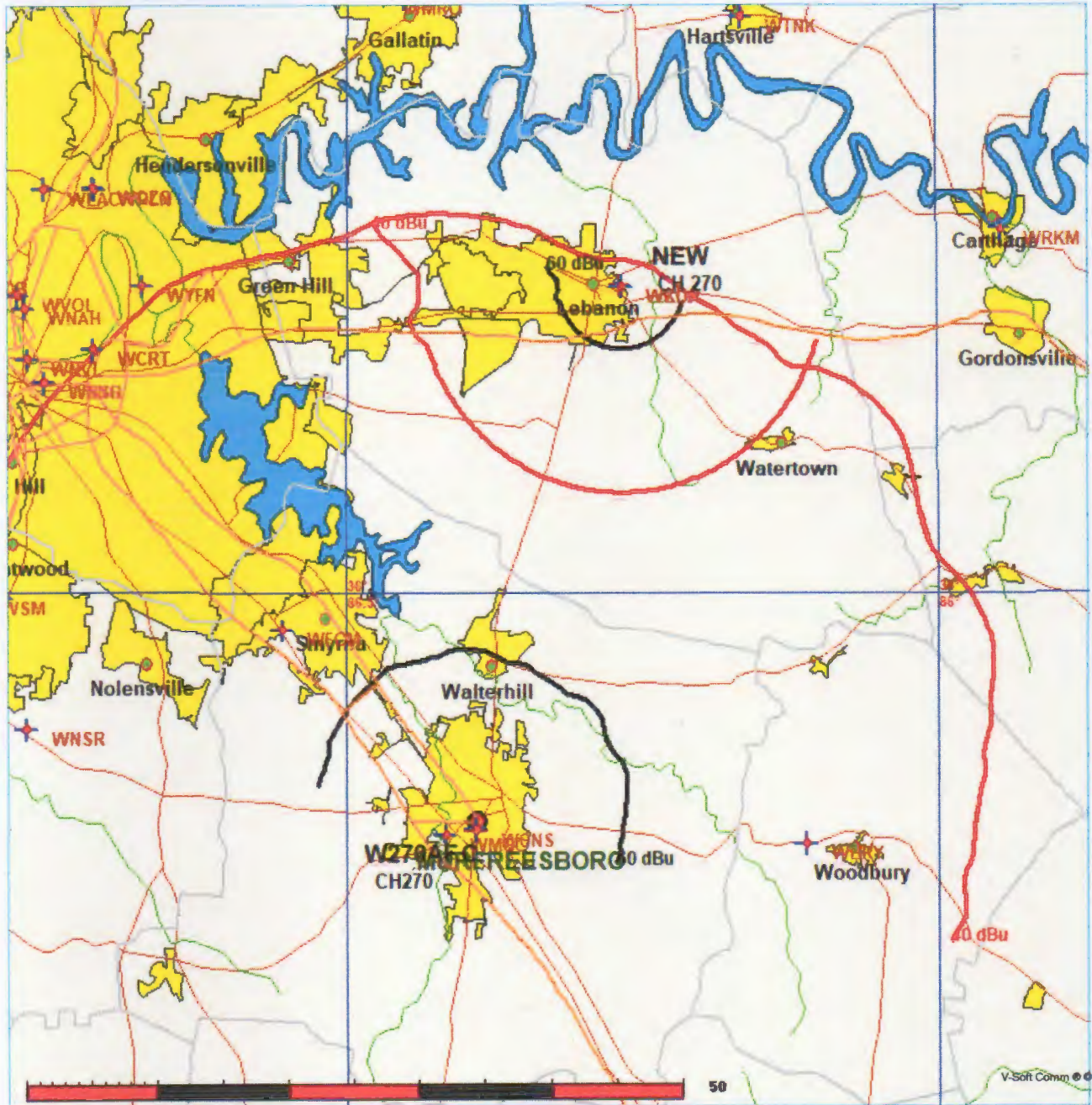
FMCommander Single Allocation Study - 07-20-2017 - NGDC 30 SEC
NEW's Overlaps (In= -6.64 km, Out= 13.88 km)

NEW CH 270 D

Lat= 36 12 26.0, Lng= 86 16 03.0
0.055 kW 27.4 M HAAT, 215.6 M COR
Prot.= 60 dBu, Intef.= 40 dBu

W270AF.C CH 270 D BPFT20170505AAE

Lat= 35 50 26.0, Lng= 86 23 27.0
0.25 kW 0 M HAAT, 276 M COR
Prot.= 60 dBu, Intef.= 40 dBu



LEBANON FILL IN

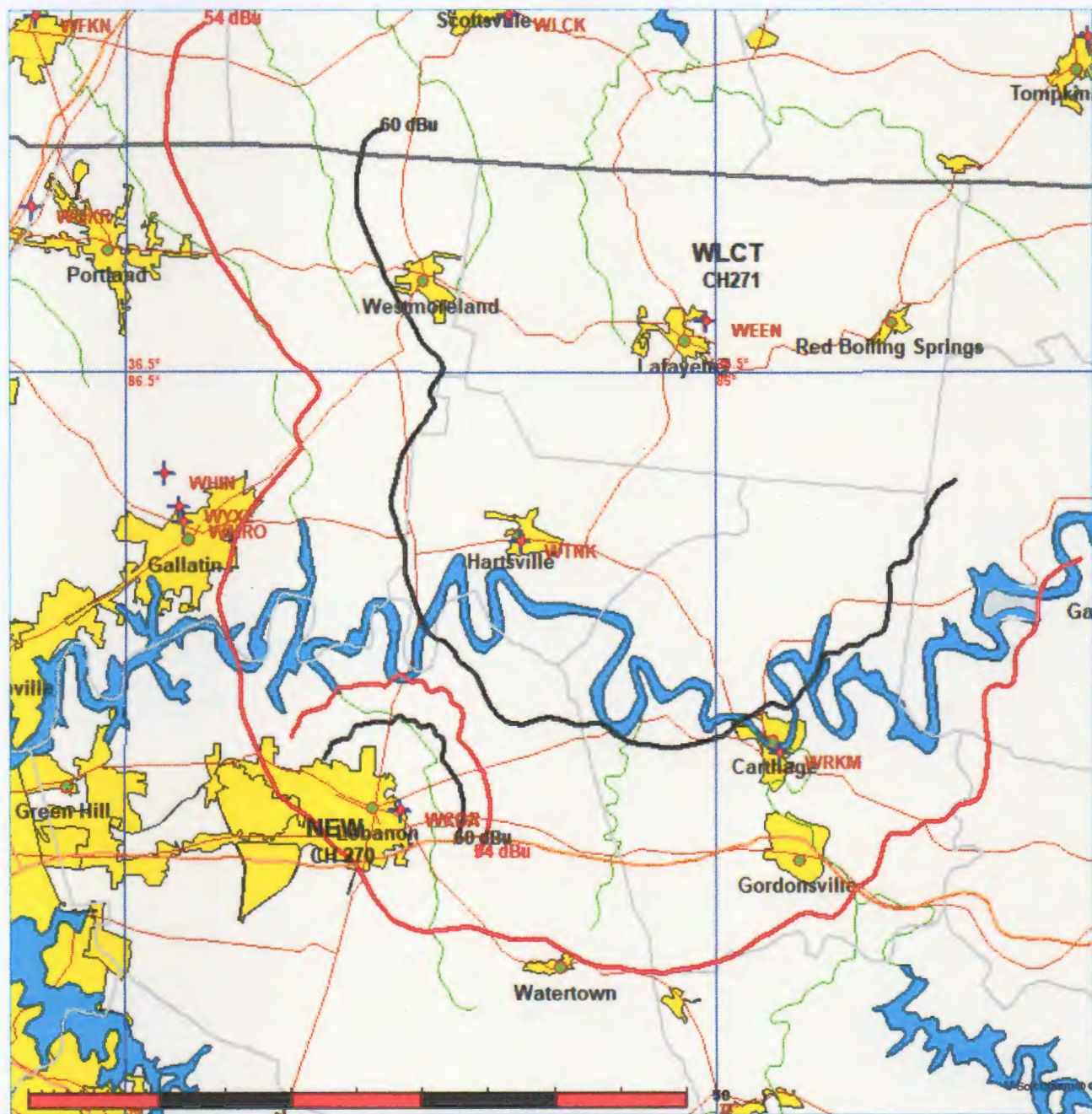
FMCommander Single Allocation Study - 07-20-2017 - NGDC 30 SEC
NEW's Overlaps (In= -11.73 km, Out= 2.45 km)

NEW CH 270 D

Lat= 36 12 26.0, Lng= 86 16 03.0
0.055 kW 27.4 M HAAT, 215.6 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WLCT CH 271 A BMLH19990624KA

Lat= 36 32 06.0, Lng= 86 00 27.0
6.0 kW 99 M HAAT, 351 M COR
Prot.= 60 dBu, Intef.= 54 dBu



LEBANON FILL IN

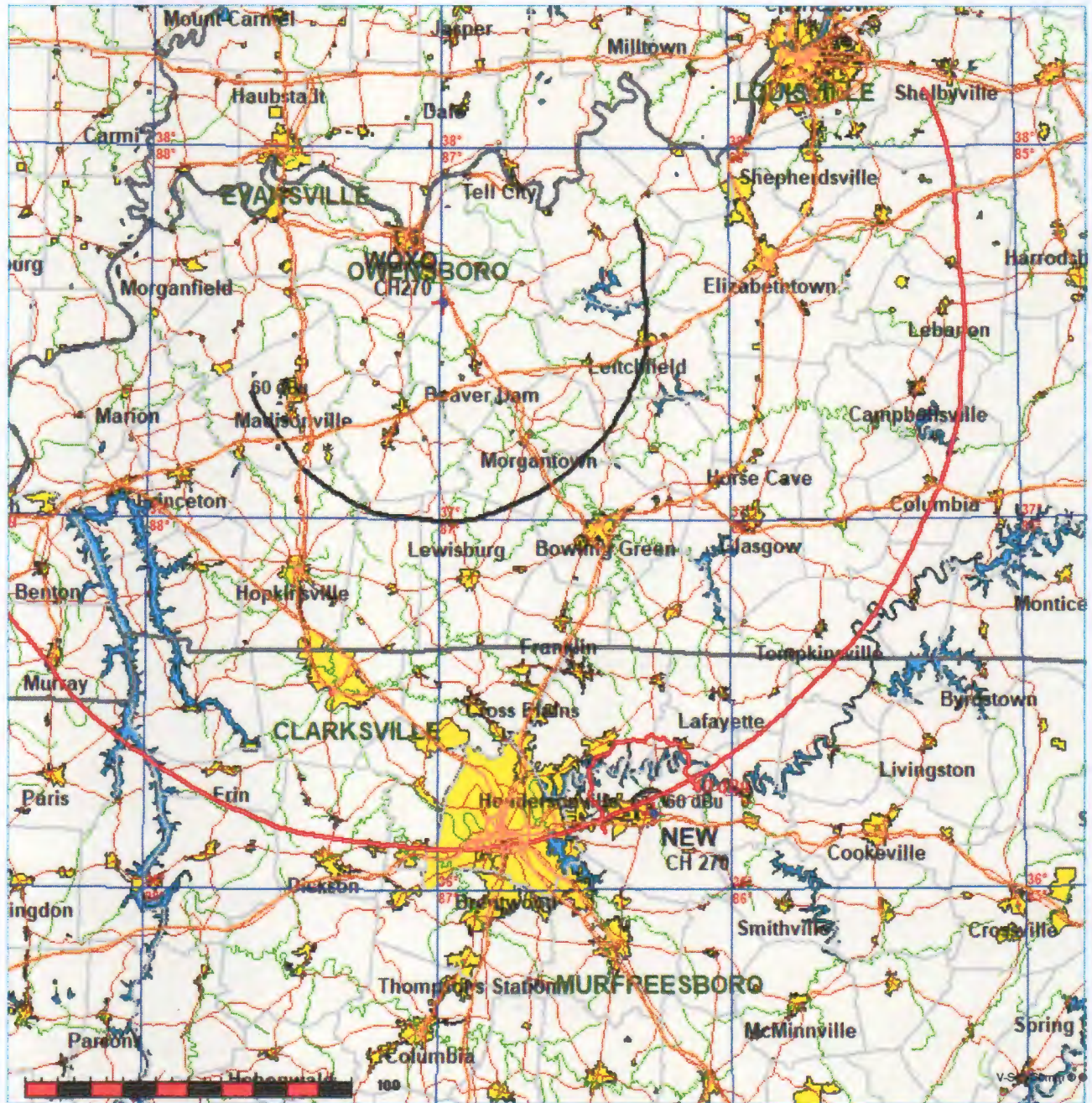
FMCommander Single Allocation Study - 07-20-2017 - NGDC 30 SEC
NEW's Overlaps (In= -3.14 km, Out= 78.6 km)

NEW CH 270 D

Lat= 36 12 26.0, Lng= 86 16 03.0
0.055 kW 27.4 M HAAT, 215.6 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WQXQ CH 270 C1 BLH19930826KA

Lat= 37 35 03.0, Lng= 86 59 29.0
100.0 kW 204 M HAAT, 346 M COR
Prot.= 60 dBu, Intef.= 40 dBu



LEBANON FILL IN

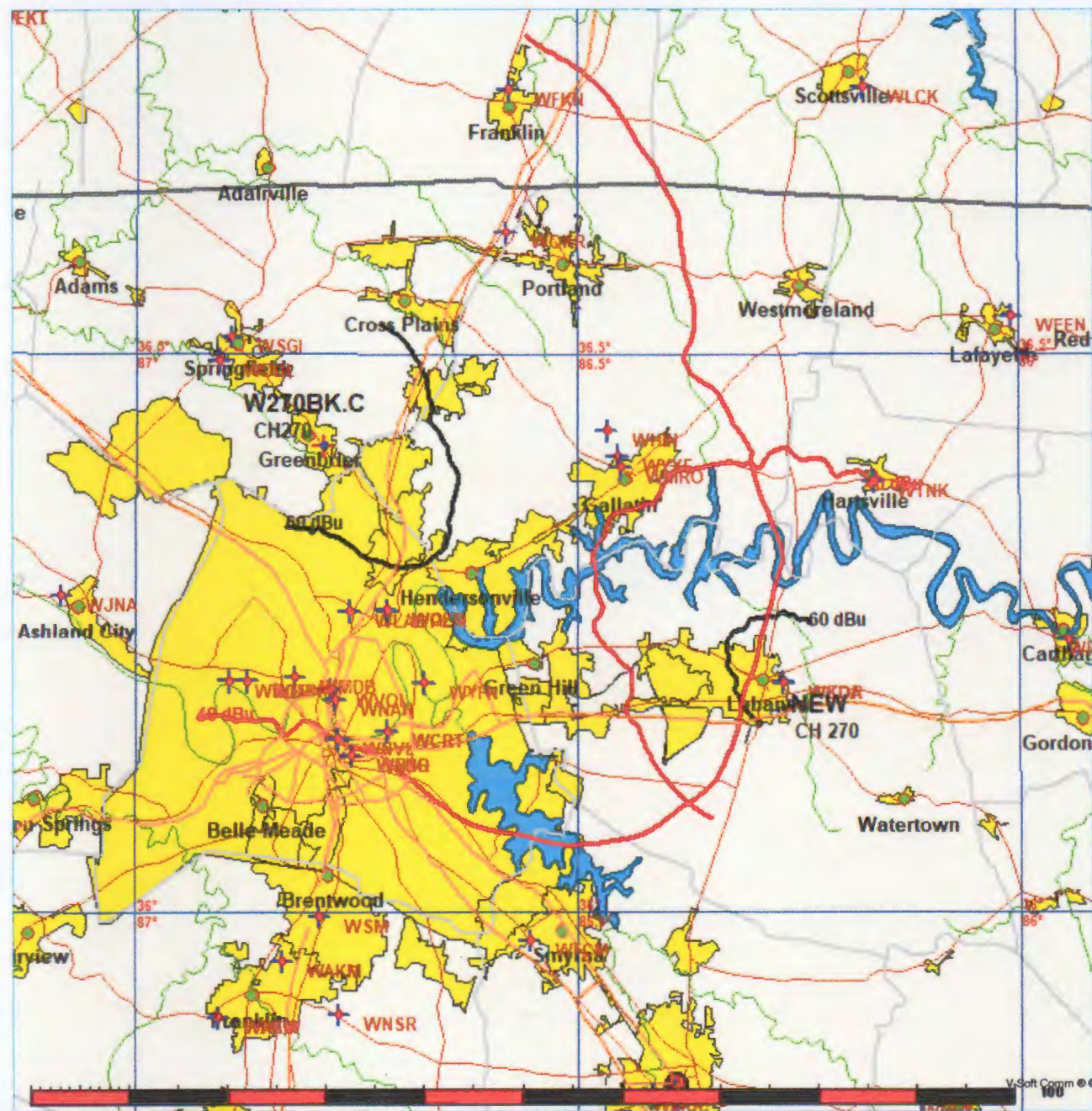
FMCommander Single Allocation Study - 07-20-2017 - NGDC 30 SEC
NEW's Overlaps (In= -3.57 km, Out= 15.98 km)

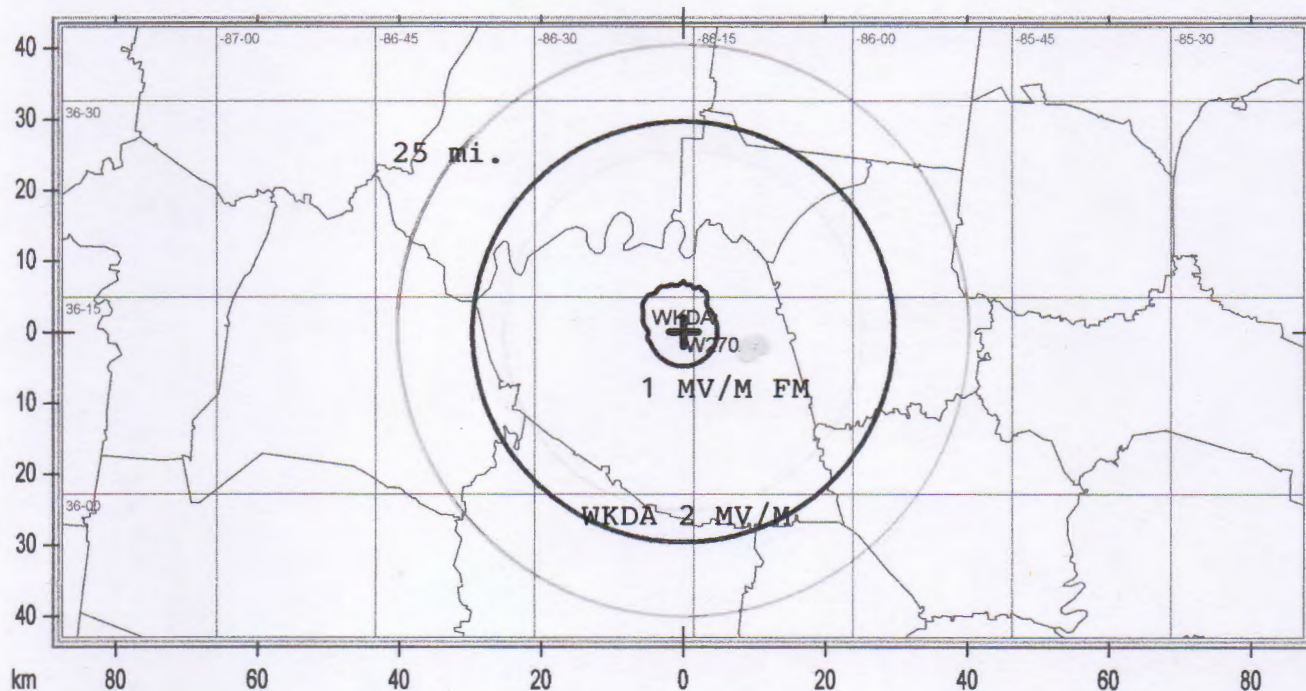
NEW CH 270 D

Lat= 36 12 26.0, Lng= 86 16 03.0
0.055 kW 27.4 M HAAT, 215.6 M COR
Prot.= 60 dBu, Intef.= 40 dBu

W270BK.C CH 270 D DA BPFT20170626ABF

Lat= 36 25 08.0, Lng= 86 47 18.0
0.25 kW 0 M HAAT, 329 M COR
Prot.= 60 dBu, Intef.= 40 dBu





SERVICE CONTOURS

County Borders
 State Borders
 Lat/Lon Grid

N. Lat. = 361226 W. Lng. = 861603
 HAAT and Distance to Contour - FCC Method - USGS 03 SEC

Azi.	AV EL	HAAT	ERP kw	dbk	Field	60-F5
000	155.5	60.1	0.1000	-10.00	1.000	7.99
030	170.1	45.5	0.1000	-10.00	1.000	6.89
060	197.9	17.7	0.1000	-10.00	1.000	5.64
090	193.2	22.4	0.1000	-10.00	1.000	5.64
120	219.9	-4.3	0.1000	-10.00	1.000	5.64
150	210.8	4.8	0.1000	-10.00	1.000	5.64
180	221.9	-6.3	0.1000	-10.00	1.000	5.64
210	204.1	11.5	0.1000	-10.00	1.000	5.64
240	200.3	15.3	0.1000	-10.00	1.000	5.64
270	192.8	22.8	0.1000	-10.00	1.000	5.64
300	163.6	52.0	0.1000	-10.00	1.000	7.40
330	157.0	58.6	0.1000	-10.00	1.000	7.89

Ave E1= 190.59 M HAAT= 25.01 M AMSL= 215.6 M



AERIAL PHOTOGRAPH OF SITE