

Channel Study

REFERENCE		CH# 248D - 97.5 MHz, Pwr= 0.14 kW, HAAT= 165.1 M, COR= 343 M								DISPLAY DATES	
36 15 49.6 N.		Average Protected F(50-50)= 14.4 km								DATA 03-21-13	
86 47 38.9 W.		Omni-directional								SEARCH 03-21-13	
CH CITY	CALL	TYPE STATE	ANT TN	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
250C0 Nashville	WSIX-FM	LIC	CX TN	187.6 7.6	24.24 BMLH20050826ABB	36 02 50.0 86 49 48.0	100.000 349	11.2 550	77.7 Capstar Tx Llc	-2.4<	-54.2*<
246C2 Belle Meade	AL6633	RSV-A	TN	44.7 224.7	5.23 RM11324	36 17 50.0 86 45 11.0	50.000 150	6.2 331	54.0	-15.1*<	-49.6*<
246C2 Belle Meade	WLVU	LIC	C TN	44.7 224.7	5.23 BLH20080428AAM	36 17 50.0 86 45 11.0	45.000 158	6.2 338	53.9 Cumulus Licensing Llc	-15.1*<	-49.5*<
248D Berry Hill	648515	APP	C TN	137.1 317.2	17.09 BNPFT20030317IFS	36 09 04.0 86 39 52.0	0.055 53	20.3 210	6.1 Educational Media Foundati	-18.3*	-38.4
248C2 Lawrenceburg	WLLX	LIC	NC TN	194.5 14.3	112.47 BLH20060206ABL	35 16 56.0 87 06 18.0	42.000 161	134.1 421	50.9 Roger Wright DbA Prospect	-37.4*<	10.3
248A Hopkinsville	WZZP	LIC	C KY	313.7 133.3	80.73 BLH20001127AAB	36 45 47.0 87 26 59.0	6.000 100	87.2 270	28.7 Saga Communications Of Tuc	-18.9*<	9.8
248D Murfreesboro	W248BM	CP	DC TN	139.2 319.5	60.81 BFPT20121001BBR	35 50 56.0 86 21 11.0	0.250	36.4 275	10.7 Way Media , Inc.	9.3	0.8
248D Murfreesboro	W248BM	LIC	DC TN	133.2 313.6	72.85 BLFT20120820AAO	35 48 49.0 86 12 20.0	0.120	44.9 392	13.6 Way Media , Inc.	12.6	9.4
248C1 Louisville	WAMZ	LIC	CX KY	24.9 205.5	220.96 BMLH20080402AAP	38 03 50.0 85 43 52.0	100.000 205	162.6 372	64.5 Cc Licenses, Llc	44.7	111.1
249D Bowling Green	634477	APP	C KY	21.2 201.4	86.62 BNPFT20030311ANQ	36 59 27.0 86 26 29.0	0.170 18	9.2 185	6.4 Starboard Media Foundation	64.1	60.1
247L1 Gainesboro	WENV-LP<	LIC	TN	88.4 269.0	88.37 BLL20040223APC	36 16 56.0 85 48 39.0	0.028 55	39.5 247	26.0 Save The Cumberland, Inc.	27.5R	60.9M
248C Knoxville	WJXB-FM	LIC	CY TN	95.4 277.1	259.10 BLH19890928KC	36 00 36.0 83 55 57.0	100.000 395	181.9 706	78.9 South Central Communicatio	61.7	129.7

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= 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.

< = Station meets FCC minimum distance spacing for its class.

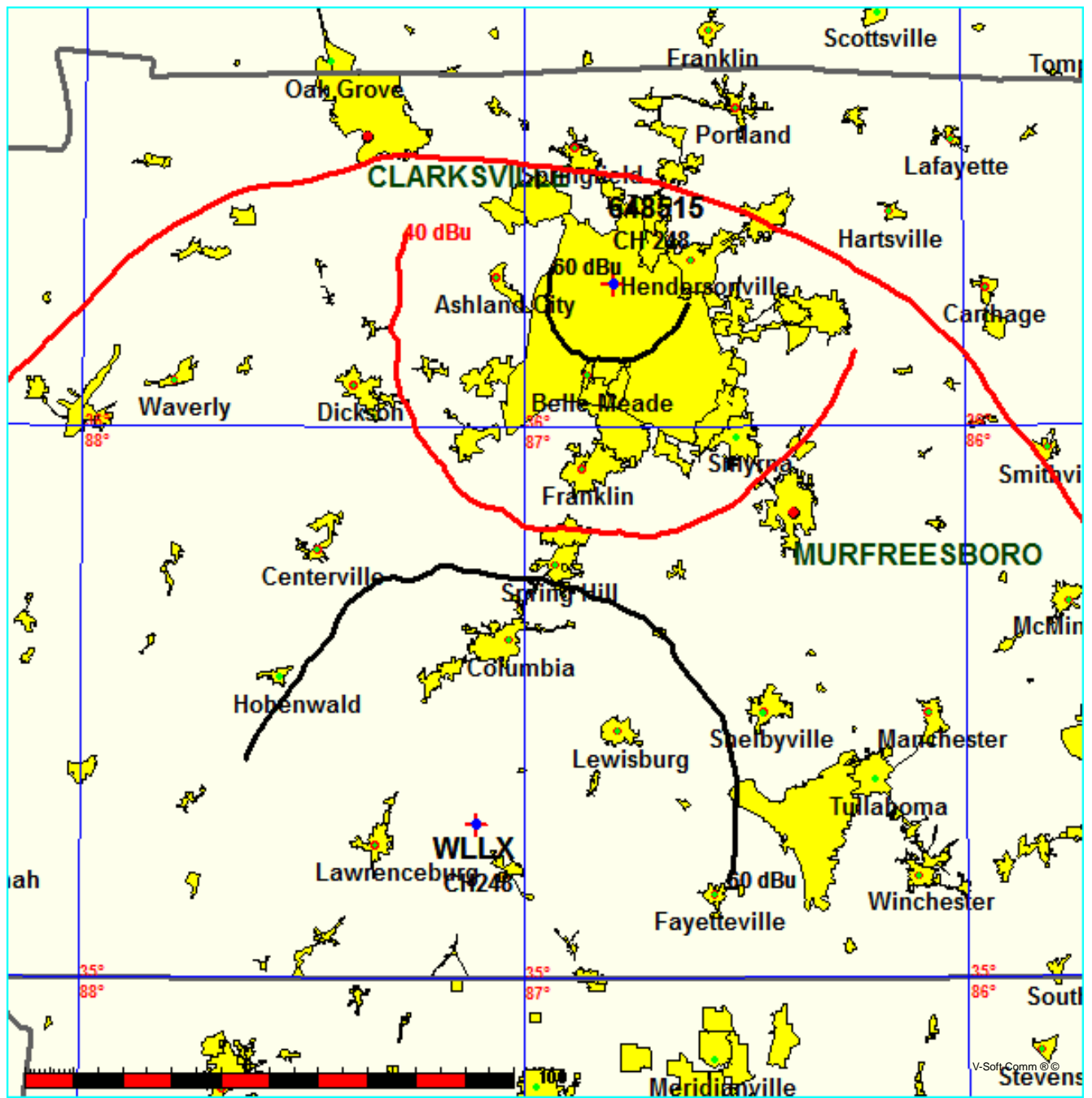
< = Contour Overlap

648515 CH 248 D

Lat= 36 15 49.6, Lng= 86 47 38.9
0.14 kW 165.1 M HAAT, 343 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WLLX CH 248 C2 73.215 N BLH20060206ABL

Lat= 35 16 56.0, Lng= 87 06 18.0
42.0 kW 161 M HAAT, 421 M COR
Prot.= 60 dBu, Intef.= 40 dBu



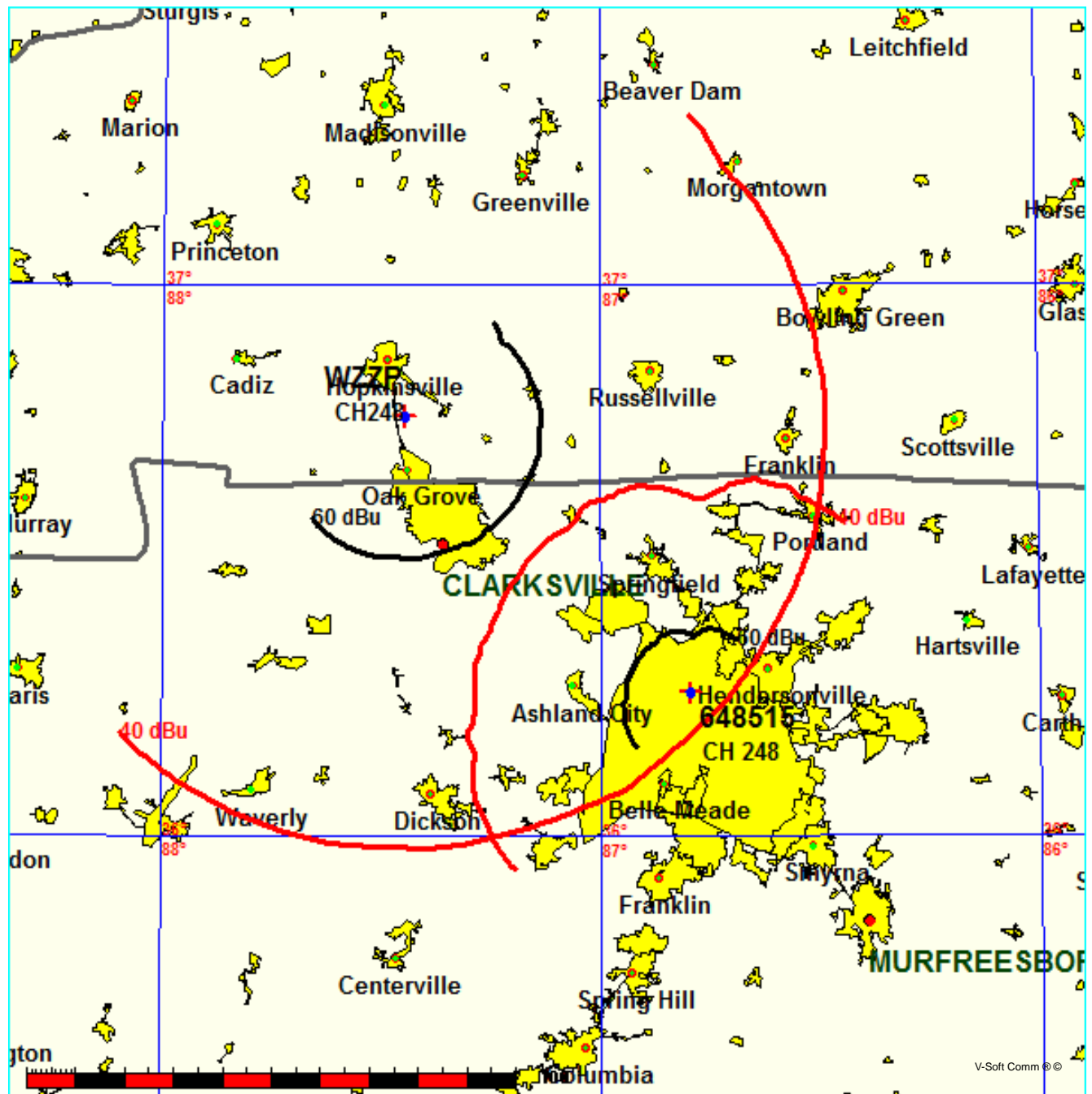
FMCommander Single Allocation Study - 03-21-2013 - NGDC 30 SEC
648515's Overlaps (In= -18.86 km, Out= 9.81 km)

648515 CH 248 D

Lat= 36 15 49.6, Lng= 86 47 38.9
0.14 kW 165.1 M HAAT, 343 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WZZP CH 248 A BLH20001127AAB

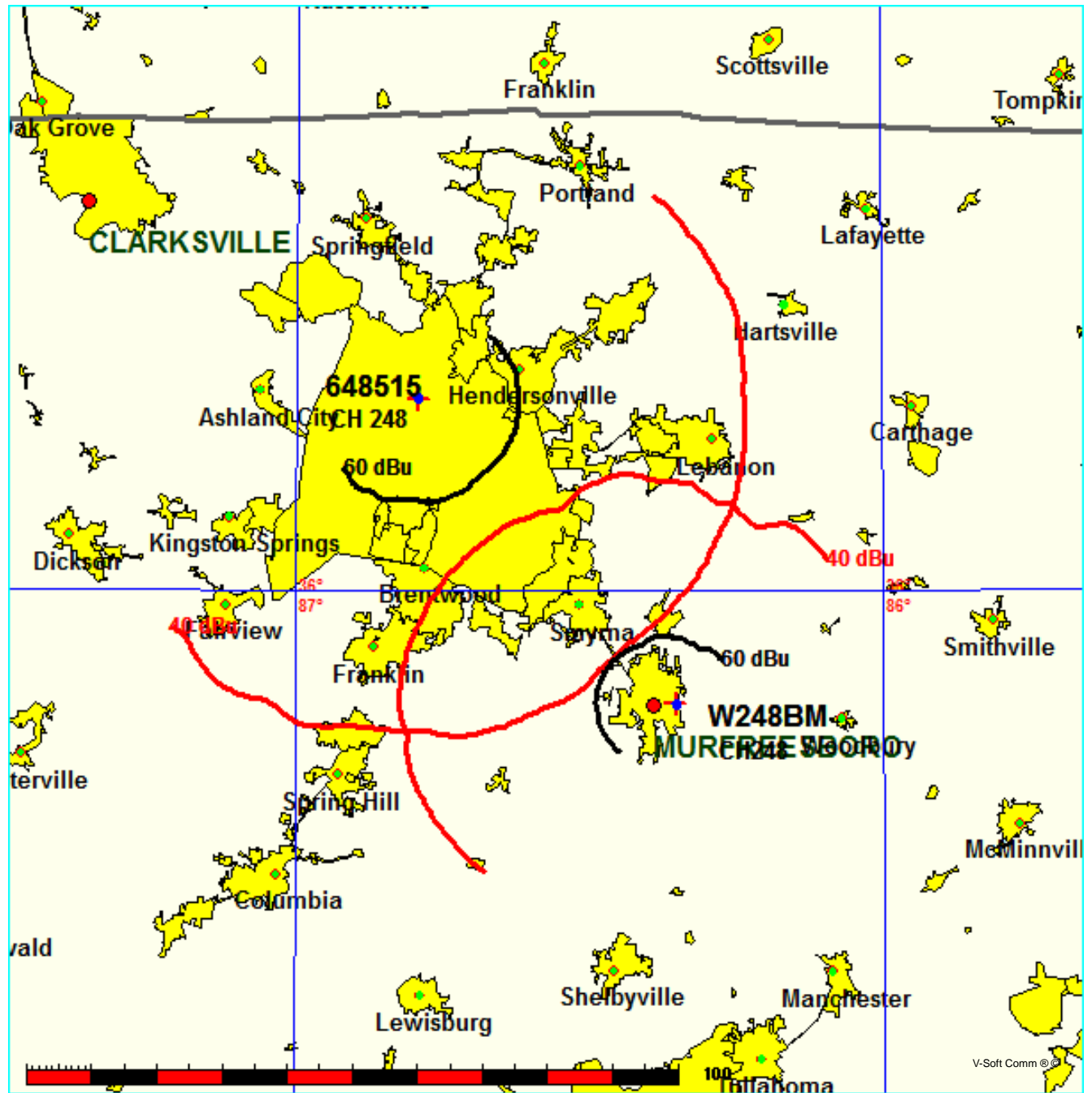
Lat= 36 45 47.0, Lng= 87 26 59.0
6.0 kW 100 M HAAT, 270 M COR
Prot.= 60 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 03-21-2013 - NGDC 30 SEC
648515's Overlaps (In= 9.25 km, Out= 0.81 km)

648515 CH 248 D
Lat= 36 15 49.6, Lng= 86 47 38.9
0.14 kW 165.1 M HAAT, 343 M COR
Prot.= 60 dBu, Intef.= 40 dBu

W248BM CH 248 D DA BPFT20121001BBR
Lat= 35 50 56.0, Lng= 86 21 11.0
0.25 kW 0 M HAAT, 275 M COR
Prot.= 60 dBu, Intef.= 40 dBu



W248BM vs. 648515.P

EMF
03-21-2013 Terrain Data: NGDC 30 SEC FMOver Analysis

W248BM. CP BPFT20121001BBR

648515

Channel = 248D
Max ERP = 0.25 kW
RCAMSL = 275 M
N. Lat. 35 50 56.0
W. Lng. 86 21 11.0
Protected
60 dBu

Channel = 248D
Max ERP = 0.14 kW
RCAMSL = 343 M
N. Lat. 36 15 49.6
W. Lng. 86 47 38.9
Interfering
40 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
294.0	000.1722	0100.9	011.8	145.0	000.1400	0184.8	050.4	39.74	
295.0	000.1687	0101.3	011.8	144.7	000.1400	0184.7	050.3	39.76	
296.0	000.1652	0101.8	011.7	144.5	000.1400	0184.5	050.2	39.78	
297.0	000.1618	0102.5	011.7	144.3	000.1400	0184.4	050.2	39.80	
298.0	000.1584	0103.0	011.7	144.1	000.1400	0184.3	050.1	39.82	
299.0	000.1550	0103.5	011.7	143.8	000.1400	0184.2	050.0	39.84	
300.0	000.1517	0103.8	011.6	143.6	000.1400	0184.1	050.0	39.85	
301.0	000.1487	0104.0	011.6	143.4	000.1400	0184.0	050.0	39.87	
302.0	000.1458	0104.1	011.5	143.1	000.1400	0184.0	049.9	39.87	
303.0	000.1428	0104.2	011.5	142.9	000.1400	0183.9	049.9	39.88	
304.0	000.1400	0104.5	011.4	142.7	000.1400	0183.8	049.9	39.89	
305.0	000.1371	0104.7	011.4	142.4	000.1400	0183.8	049.9	39.89	
306.0	000.1342	0104.9	011.3	142.2	000.1400	0183.7	049.8	39.89	
307.0	000.1314	0105.2	011.3	142.0	000.1400	0183.6	049.8	39.89	
308.0	000.1287	0105.6	011.2	141.7	000.1400	0183.4	049.8	39.89	
309.0	000.1259	0105.8	011.2	141.5	000.1400	0183.3	049.8	39.88	
310.0	000.1232	0105.9	011.1	141.3	000.1400	0183.1	049.8	39.87	
311.0	000.1212	0105.9	011.1	141.1	000.1400	0182.8	049.8	39.85	
312.0	000.1192	0106.0	011.1	140.8	000.1400	0182.6	049.8	39.84	
313.0	000.1173	0106.3	011.0	140.6	000.1400	0182.3	049.8	39.83	
314.0	000.1153	0106.7	011.0	140.4	000.1400	0182.1	049.9	39.82	
315.0	000.1134	0107.0	011.0	140.2	000.1400	0181.9	049.9	39.80	
316.0	000.1115	0107.0	010.9	139.9	000.1400	0181.7	049.9	39.78	
317.0	000.1096	0106.8	010.9	139.7	000.1400	0181.5	049.9	39.76	
318.0	000.1077	0106.4	010.8	139.5	000.1400	0181.4	050.0	39.73	
319.0	000.1059	0105.9	010.7	139.3	000.1400	0181.4	050.1	39.71	
320.0	000.1040	0105.2	010.7	139.1	000.1400	0181.4	050.1	39.68	
321.0	000.1029	0104.5	010.6	138.8	000.1400	0181.5	050.2	39.65	
322.0	000.1018	0103.9	010.6	138.6	000.1400	0181.5	050.3	39.63	
323.0	000.1007	0103.6	010.5	138.4	000.1400	0181.7	050.3	39.61	
324.0	000.0997	0103.3	010.5	138.2	000.1400	0181.8	050.4	39.60	
325.0	000.0986	0102.5	010.4	138.0	000.1400	0182.0	050.5	39.57	
326.0	000.0975	0101.3	010.3	137.8	000.1400	0182.1	050.6	39.54	
327.0	000.0965	0100.0	010.2	137.7	000.1400	0182.3	050.7	39.50	
328.0	000.0954	0099.2	010.2	137.5	000.1400	0182.5	050.8	39.47	
329.0	000.0944	0099.0	010.1	137.3	000.1400	0182.7	050.9	39.45	
330.0	000.0933	0099.7	010.1	137.1	000.1400	0182.8	050.9	39.45	
331.0	000.0929	0100.9	010.2	136.9	000.1400	0183.0	050.9	39.46	
332.0	000.0924	0102.4	010.2	136.7	000.1400	0183.2	050.9	39.47	
333.0	000.0920	0104.0	010.3	136.5	000.1400	0183.4	050.9	39.49	

334.0	000.0915	0105.4	010.4	136.2	000.1400	0183.6	050.9	39.50
335.0	000.0911	0106.7	010.4	136.0	000.1400	0183.8	050.9	39.50
336.0	000.0906	0107.8	010.4	135.8	000.1400	0184.0	050.9	39.50
337.0	000.0902	0108.5	010.5	135.6	000.1400	0184.2	050.9	39.49
338.0	000.0897	0109.0	010.5	135.4	000.1400	0184.3	051.0	39.47
339.0	000.0893	0109.1	010.5	135.2	000.1400	0184.5	051.1	39.45
340.0	000.0888	0109.1	010.4	135.1	000.1400	0184.6	051.2	39.42
341.0	000.0887	0109.2	010.4	134.9	000.1400	0184.8	051.2	39.40
342.0	000.0886	0109.4	010.5	134.7	000.1400	0184.9	051.3	39.38
343.0	000.0884	0109.7	010.5	134.5	000.1400	0185.0	051.4	39.35
344.0	000.0883	0110.0	010.5	134.3	000.1400	0185.2	051.5	39.33
345.0	000.0882	0110.2	010.5	134.1	000.1400	0185.3	051.6	39.30
346.0	000.0881	0110.1	010.5	134.0	000.1400	0185.4	051.7	39.27
347.0	000.0880	0109.8	010.5	133.8	000.1400	0185.6	051.8	39.23
348.0	000.0879	0109.0	010.4	133.7	000.1400	0185.7	051.9	39.18
349.0	000.0877	0107.9	010.4	133.5	000.1400	0185.8	052.1	39.13
350.0	000.0876	0106.4	010.3	133.4	000.1400	0185.9	052.2	39.07
351.0	000.0877	0105.2	010.2	133.3	000.1400	0186.0	052.4	39.02
352.0	000.0877	0103.8	010.2	133.2	000.1400	0186.1	052.5	38.96
353.0	000.0878	0102.2	010.1	133.1	000.1400	0186.2	052.7	38.90
354.0	000.0879	0100.6	010.0	133.0	000.1400	0186.3	052.9	38.83
355.0	000.0879	0099.2	010.0	132.9	000.1400	0186.3	053.0	38.77
356.0	000.0880	0099.0	009.9	132.8	000.1400	0186.5	053.2	38.73
357.0	000.0880	0098.8	009.9	132.6	000.1400	0186.6	053.3	38.69
358.0	000.0881	0098.2	009.9	132.5	000.1400	0186.7	053.4	38.64
359.0	000.0881	0098.0	009.9	132.4	000.1400	0186.8	053.6	38.60
000.0	000.0882	0097.8	009.9	132.3	000.1400	0187.0	053.7	38.55
001.0	000.0883	0097.7	009.9	132.2	000.1400	0187.1	053.8	38.51
002.0	000.0883	0097.7	009.9	132.1	000.1400	0187.2	054.0	38.46
003.0	000.0884	0097.4	009.9	131.9	000.1400	0187.3	054.1	38.41
004.0	000.0884	0097.0	009.9	131.8	000.1400	0187.4	054.2	38.36
005.0	000.0885	0095.8	009.8	131.8	000.1400	0187.5	054.4	38.30
006.0	000.0886	0093.8	009.7	131.8	000.1400	0187.5	054.6	38.22
007.0	000.0886	0091.7	009.6	131.8	000.1400	0187.5	054.8	38.15
008.0	000.0887	0089.7	009.5	131.7	000.1400	0187.6	055.0	38.07
009.0	000.0887	0088.6	009.4	131.7	000.1400	0187.6	055.2	38.01
010.0	000.0888	0087.8	009.4	131.6	000.1400	0187.7	055.3	37.95
011.0	000.0888	0086.6	009.3	131.6	000.1400	0187.7	055.5	37.89
012.0	000.0888	0085.4	009.3	131.6	000.1400	0187.7	055.7	37.82
013.0	000.0888	0085.3	009.3	131.5	000.1400	0187.8	055.8	37.77
014.0	000.0888	0085.9	009.3	131.4	000.1400	0187.9	056.0	37.73
015.0	000.0888	0086.4	009.3	131.3	000.1400	0188.0	056.1	37.68
016.0	000.0888	0086.1	009.3	131.2	000.1400	0188.1	056.2	37.62
017.0	000.0888	0085.3	009.3	131.2	000.1400	0188.1	056.4	37.56
018.0	000.0888	0084.0	009.2	131.2	000.1400	0188.1	056.6	37.50

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60dBu contour of second adjacent channel station WSIX, channel 250C0, Nashville, TN. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for 648515.P:	140 watts
The proposed COR for 648515.P:	100 meters
WSIX F(50/50) contour at proposed site:	86.6dBu
The F(50/10) contour of proposed 648515.P:	126.6dBu

The predicted distance to the 126.6dbu interfering contour is 38.82 meters. Taking into account the vertical elevation pattern of the Jampro JLCP single bay antenna and the height above ground of 100M, it has been determined that the interfering contour of 126.6dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 82.157M above ground.

As can be seen in Exhibit 13–A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 82.157 meter aperture.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
New
Berry Hill, TN

ERP (kw): 0.14
Height of Antenna above Ground (m): 100
Translator's IX Contour: 126.6
Antenna Type: JLCP-1

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.1400	38.8208	100.000
5	0.994	0.1383	38.5878	96.637
10	0.975	0.1331	37.8502	93.427
15	0.940	0.1237	36.4915	90.555
20	0.910	0.1159	35.3269	87.917
25	0.880	0.1084	34.1623	85.562
30	0.840	0.0988	32.6094	83.695
35	0.770	0.0830	29.8920	82.855
40	0.710	0.0706	27.5627	82.283
45	0.650	0.0592	25.2335	82.157
50	0.600	0.0504	23.2925	82.157
55	0.520	0.0379	20.1868	83.464
60	0.450	0.0284	17.4693	84.871
65	0.380	0.0202	14.7519	86.630
70	0.320	0.0143	12.4226	88.327
75	0.250	0.0088	9.7052	90.626
80	0.180	0.0045	6.9877	93.118
85	0.140	0.0027	5.4349	94.586
90	0.010	0.0000	0.3882	99.612

Compliance with C.F.R. 74.1204

The proposed FM Translator is also located within the protected 60dBu contour of second adjacent channel station WLVU, channel 246C2, Nashville, TN. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for 648515.P:	140 watts
The proposed COR for 648515.P:	100 meters
WLVU F(50/50) contour at proposed site:	102.8dBu
The F(50/10) contour of proposed 648515.P:	142.8dBu

The predicted distance to the 142.8dbu interfering contour is 6.01 meters. Taking into account the vertical elevation pattern of the Jampro JLCP single bay antenna and the height above ground of 100M, it has been determined that the interfering contour of 142.8dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 97.236M above ground.

As can be seen in Exhibit 13–A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 97.236 meter aperture.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
New
Berry Hill, TN

ERP (kw): 0.14
Height of Antenna above Ground (m): 100
Translator's IX Contour: 142.8
Antenna Type: JLC-P-1

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.1400	6.0126	100.000
5	0.994	0.1383	5.9765	99.479
10	0.975	0.1331	5.8623	98.982
15	0.940	0.1237	5.6519	98.537
20	0.910	0.1159	5.4715	98.129
25	0.880	0.1084	5.2911	97.764
30	0.840	0.0988	5.0506	97.475
35	0.770	0.0830	4.6297	97.345
40	0.710	0.0706	4.2690	97.256
45	0.650	0.0592	3.9082	97.236
50	0.600	0.0504	3.6076	97.236
55	0.520	0.0379	3.1266	97.439
60	0.450	0.0284	2.7057	97.657
65	0.380	0.0202	2.2848	97.929
70	0.320	0.0143	1.9240	98.192
75	0.250	0.0088	1.5032	98.548
80	0.180	0.0045	1.0823	98.934
85	0.140	0.0027	0.8418	99.161
90	0.010	0.0000	0.0601	99.940



Google earth

feet 800
meters 200



NAD 27

36 15' 49.6" N

86 47' 38.9" W

Marker: 100M at zero degree true north