

Doug Vernier, Telecommunications Consultants
8893 Lakes Blvd, West Palm Beach, FL 33412

Contour-to-Contour - Cross-Service Translator Channel Study
Coloff Media, Inc.

REFERENCE
42 30 08.0 N.
92 20 27.0 W.

CH# 268D - 101.5 MHz, Pwr= 0.25 kW, HAAT= 68.8 M, COR= 347.4 M
Average Protected F(50-50)= 10.81 km
Omni-directional

DISPLAY DATES
DATA 01-18-18
SEARCH 01-18-18

CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
270C Waterloo	KNWS-FM	LIC _CX IA		105.3 285.6	42.34 BLED20051102ABH	42 24 02.0 91 50 36.0	100.000 479	12.3 762	84.9 University of Northwestern	-43.7*<***
266C1 Marshalltown	KXIA	LIC _CN IA		221.4 41.0	73.46 BLH19950727KE	42 00 19.0 92 55 45.0	100.000 200	8.4 491	64.4 Marshalltown Broadcasting,	8.0
268A Rudd	AL3621	VAC __N IA		326.6 146.2	83.26 RM	43 07 34.0 92 54 20.0	6.000 100	88.2 436	29.5	13.6
265D Waverly	K265EH	LIC _C_ IA		345.0 164.9	29.39 BLFT20110727AGU	42 45 27.0 92 26 03.0	0.170 107	0.9 407	12.4 Educational Media Foundati	15.8
215C Cedar Falls	KUNI	LIC _CY IA		117.4 297.7	44.74 BMLED19841106LW	42 18 59.0 91 51 31.0	100.000 524	0.0 799	0.0 28.5R University Of Northern Iow	16.2M
268L1 Marshalltown	KDNH-LP	LIC ____ IA		223.1 42.7	68.76 BLL20151124CZL	42 02 56.0 92 54 34.3	0.100 17	305	K. of C. Building, Inc.	23.5
268D Cedar Rapids	K268CY	LIC _V_ IA		126.6 307.2	81.96 BLFT20160719AAV	42 03 34.2 91 32 38.8	0.030	13.2 278	4.1 Citicasters Licenses, Inc.	37.0

Terrain database is GLOBE 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= West 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)
Incoming contour overlap is ignored.
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
<*** KNWS-FM is Protected using U to D ratio. Please see XField attachment.

HOW TO READ THE FM COMPUTER PRINT-OUT

Translator Reference Station

The computer printout should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. The 60 dBu protected contour is predicted from the Commission's F(50-50) table. Contour distances are in kilometers and are predicted using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90. The column labeled "* OUT *" shows the greatest distance in kilometers of overlap (or smallest distance of clearance) between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column indicate outgoing contour overlap. Since translators are able to receive interference there is no "In" or incoming column in this report.

Listed antenna heights and power are the specific antenna heights and power from the FCC database.

Under the "AZI" column, the first row of numbers indicate the True North azimuths from the reference station toward the database stations, while the numbers in the second row indicate the reverse bearings from the database stations to the reference station. Bearings are calculated using spherical trigonometry.

The columns labeled "INT" and "PRO" contain the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

For I.F. relationships the minimum spacings the "OUT" columns change its significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column displays the **available clear space** separation in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" if the facility is directional. "Z" indicates a 73.215 directional. An "N" indicates it is a 73.215 station that operates with an omni-directional antenna. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt or an "X" if the commission is not sure, otherwise it will be an "N" or left blank.

New-CF Cedar Falls, IA, Showing Protection to KNWS-FM
 74.1204(d) Study - Using GLOBE 30 SEC Terrain Database
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 86.4 Meters
 New-CF Antenna Model = SHPX4H

Protected Station's Contour = 78.36035 dBu
 Translator's or LPFM's full Interference contour 118.36035

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kw
 Distance between stations = 42.3 km
 Protected Station= KNWS-FM, 100 kw, 762 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	133.9530	133.9530	086.400
05.00	0.951	1.0	0.2261	127.3893	126.9046	075.297
10.00	0.814	1.0	0.1656	109.0378	107.3812	067.466
15.00	0.615	1.0	0.0946	082.3811	079.5740	065.078
20.00	0.391	1.0	0.0382	052.3756	049.2170	068.486
25.00	0.178	1.0	0.0079	023.8436	021.6097	076.323
30.00	0.004	1.0	0.0000	000.5358	000.4640	086.132
35.00	0.117	1.0	0.0034	015.6725	012.8382	077.411
40.00	0.182	1.0	0.0083	024.3794	018.6757	070.729
45.00	0.2	1.0	0.0100	026.7906	018.9438	067.456
50.00	0.184	1.0	0.0085	024.6474	015.8430	067.519
55.00	0.15	1.0	0.0056	020.0930	011.5248	069.941
60.00	0.11	1.0	0.0030	014.7348	007.3674	073.639
65.00	0.072	1.0	0.0013	009.6446	004.0760	077.659
70.00	0.042	1.0	0.0004	005.6260	001.9242	081.113
75.00	0.021	1.0	0.0001	002.8130	000.7281	083.683
80.00	0.008	1.0	0.0000	001.0716	000.1861	085.345
85.00	0.002	1.0	0.0000	000.2679	000.0233	086.133
90.00	0.001	1.0	0.0000	000.1340	000.0000	086.266

Contour-to-Contour Map, Proposed vs KXIA
Coloff Media, Inc.

FMCommander Single Allocation Study - 01-24-2018 - GLOBE 30 Sec
New-CF's Overlaps (In= 53.52 km, Out= 7.95 km)

New-CF CH 268 D

Lat= 42 30 08.0, Lng= 92 20 27.0

0.25 kW 68.8 m HAAT, 347.4 m COR

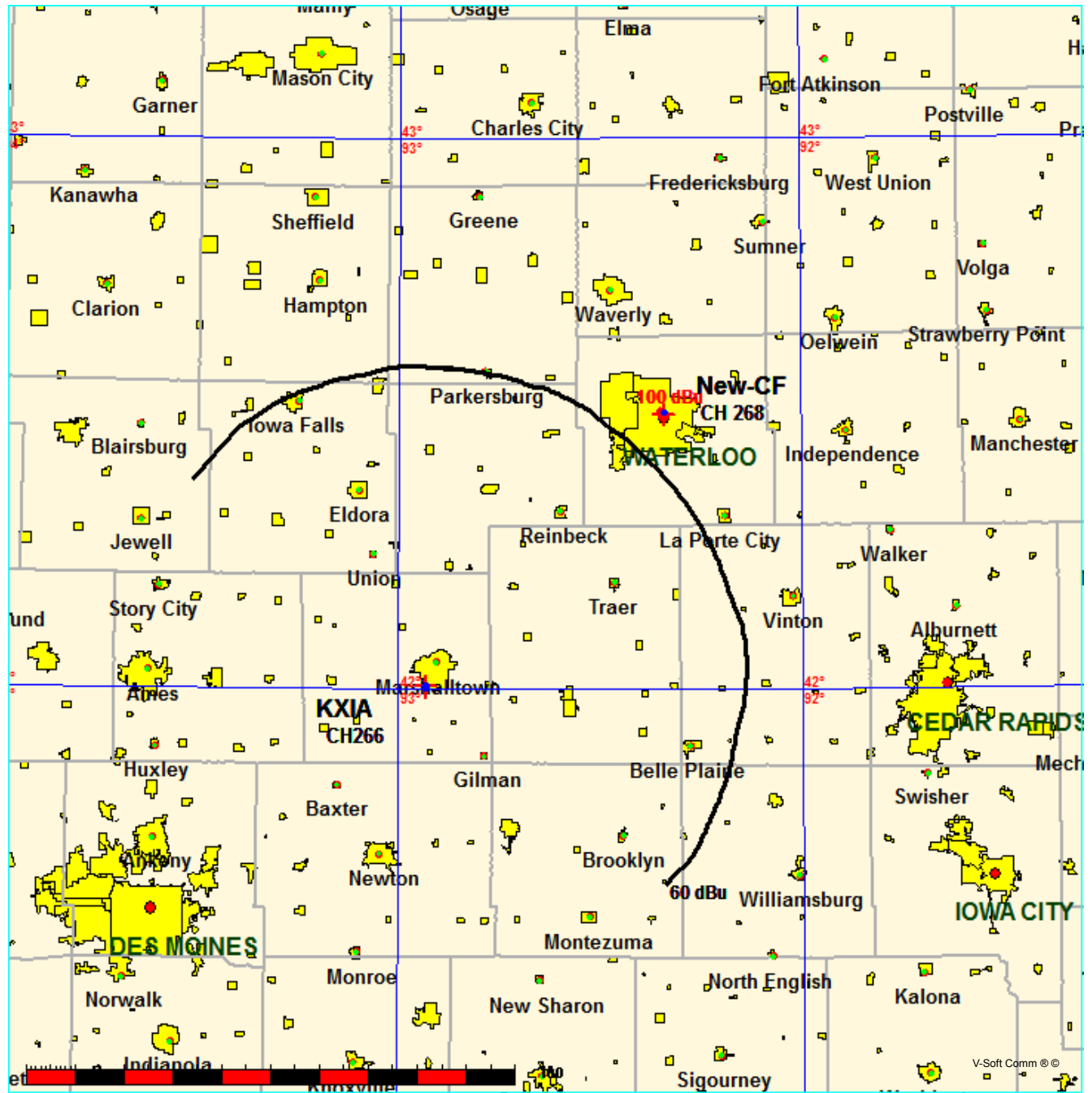
Prot.= 60 dBu, Intef.= 100 dBu

KXIA CH 266 C1 BLH19950727KE

Lat= 42 00 19.0, Lng= 92 55 45.0

100.0 kW 200 m HAAT, 491 m COR

Prot.= 60 dBu, Intef.= 100 dBu



01-24-2018

Terrain Data: GLOBE 30 Sec

FMOver Analysis

KXIA BLH19950727KE

New-CF

Channel = 266C1

Max ERP = 100 kW

RCAMSL = 491 m

N. Lat. 42 00 19.0

W. Lng. 92 55 45.0

Protected

60 dBu

Channel = 268D

Max ERP = 0.25 kW

RCAMSL = 347.4 m

N. Lat. 42 30 08.0

W. Lng. 92 20 27.0

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
341.0	100.0000	0208.9	064.6	275.1	000.2500	0063.1	069.5	28.79	
342.0	100.0000	0209.2	064.7	275.5	000.2500	0062.9	068.5	29.05	
343.0	100.0000	0209.1	064.7	275.9	000.2500	0062.8	067.4	29.31	
344.0	100.0000	0208.3	064.6	276.2	000.2500	0062.7	066.4	29.58	
345.0	100.0000	0207.1	064.5	276.4	000.2500	0062.6	065.3	29.86	
346.0	100.0000	0206.0	064.4	276.7	000.2500	0062.6	064.2	30.15	
347.0	100.0000	0205.3	064.3	277.0	000.2500	0062.6	063.1	30.44	
348.0	100.0000	0205.2	064.3	277.3	000.2500	0062.6	062.0	30.74	
349.0	100.0000	0205.6	064.3	277.7	000.2500	0062.6	061.0	31.04	
350.0	100.0000	0206.3	064.4	278.1	000.2500	0062.7	059.9	31.36	
351.0	100.0000	0207.3	064.5	278.5	000.2500	0062.9	058.9	31.69	
352.0	100.0000	0208.5	064.6	278.9	000.2500	0063.0	057.9	32.03	
353.0	100.0000	0209.7	064.7	279.3	000.2500	0063.2	056.8	32.37	
354.0	100.0000	0210.5	064.8	279.7	000.2500	0063.4	055.7	32.73	
355.0	100.0000	0211.4	064.9	280.1	000.2500	0063.6	054.7	33.08	
356.0	100.0000	0211.5	064.9	280.4	000.2500	0063.7	053.6	33.45	
357.0	100.0000	0211.3	064.9	280.7	000.2500	0063.8	052.5	33.82	
358.0	100.0000	0209.7	064.7	280.8	000.2500	0063.9	051.3	34.20	
359.0	100.0000	0208.0	064.6	280.9	000.2500	0063.9	050.2	34.57	
000.0	100.0000	0206.3	064.4	280.9	000.2500	0064.0	049.1	34.94	
001.0	100.0000	0206.1	064.4	281.2	000.2500	0064.1	047.9	35.31	
002.0	100.0000	0206.0	064.4	281.4	000.2500	0064.1	046.8	35.68	
003.0	100.0000	0206.0	064.4	281.6	000.2500	0064.2	045.7	36.05	
004.0	100.0000	0206.1	064.4	281.8	000.2500	0064.2	044.6	36.44	
005.0	100.0000	0205.8	064.3	281.9	000.2500	0064.2	043.5	36.84	
006.0	100.0000	0205.6	064.3	282.1	000.2500	0064.2	042.4	37.24	
007.0	100.0000	0205.7	064.3	282.2	000.2500	0064.2	041.3	37.66	
008.0	100.0000	0205.8	064.4	282.3	000.2500	0064.2	040.1	38.08	
009.0	100.0000	0205.8	064.4	282.4	000.2500	0064.2	039.0	38.52	
010.0	100.0000	0205.6	064.3	282.5	000.2500	0064.2	037.9	38.96	
011.0	100.0000	0205.5	064.3	282.5	000.2500	0064.1	036.8	39.42	
012.0	100.0000	0205.9	064.4	282.6	000.2500	0064.1	035.6	39.88	
013.0	100.0000	0206.4	064.4	282.7	000.2500	0064.1	034.5	40.36	
014.0	100.0000	0206.6	064.4	282.7	000.2500	0064.1	033.4	40.84	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
015.0	100.0000	0206.5	064.4	282.6	000.2500	0064.1	032.3	41.34
016.0	100.0000	0205.9	064.4	282.3	000.2500	0064.2	031.2	41.86
017.0	100.0000	0205.5	064.3	282.1	000.2500	0064.2	030.0	42.43
018.0	100.0000	0205.6	064.3	281.9	000.2500	0064.2	028.9	43.06
019.0	100.0000	0206.0	064.4	281.7	000.2500	0064.2	027.8	43.73
020.0	100.0000	0206.9	064.5	281.5	000.2500	0064.2	026.7	44.45
021.0	100.0000	0208.4	064.6	281.4	000.2500	0064.1	025.5	45.21
022.0	100.0000	0209.8	064.7	281.2	000.2500	0064.1	024.4	46.01
023.0	100.0000	0210.6	064.8	280.9	000.2500	0063.9	023.3	46.82
024.0	100.0000	0210.9	064.8	280.3	000.2500	0063.6	022.2	47.63
025.0	100.0000	0210.9	064.8	279.5	000.2500	0063.3	021.1	48.45
026.0	100.0000	0210.8	064.8	278.6	000.2500	0062.9	020.0	49.29
027.0	100.0000	0210.8	064.8	277.5	000.2500	0062.6	018.9	50.13
028.0	100.0000	0210.6	064.8	276.2	000.2500	0062.7	017.9	51.04
029.0	100.0000	0210.2	064.8	274.6	000.2500	0063.2	016.9	51.97
030.0	100.0000	0209.9	064.7	272.7	000.2500	0063.3	015.9	52.86
031.0	100.0000	0209.3	064.7	270.5	000.2500	0063.4	014.9	53.51
032.0	100.0000	0207.9	064.5	267.6	000.2500	0062.9	014.0	54.51
033.0	100.0000	0206.5	064.4	264.3	000.2500	0059.9	013.2	55.21
034.0	100.0000	0205.5	064.3	260.7	000.2500	0059.0	012.4	56.22
035.0	100.0000	0205.0	064.3	256.7	000.2500	0058.1	011.7	57.24
036.0	100.0000	0205.0	064.3	252.3	000.2500	0058.9	011.0	58.48
037.0	100.0000	0205.4	064.3	247.3	000.2500	0059.7	010.3	59.67
038.0	100.0000	0206.4	064.4	241.8	000.2500	0061.2	009.8	60.88
039.0	100.0000	0207.2	064.5	235.6	000.2500	0065.8	009.3	62.26
040.0	100.0000	0207.2	064.5	228.8	000.2500	0074.5	009.1	63.71
041.0	100.0000	0206.4	064.4	221.6	000.2500	0078.6	009.1	64.17
042.0	100.0000	0205.3	064.3	214.7	000.2500	0065.3	009.2	62.33
043.0	100.0000	0204.6	064.2	208.0	000.2500	0058.6	009.5	60.95
044.0	100.0000	0204.6	064.2	201.8	000.2500	0057.8	009.9	60.19
045.0	100.0000	0205.1	064.3	195.9	000.2500	0054.7	010.3	58.92
046.0	100.0000	0205.5	064.3	190.7	000.2500	0057.9	010.9	58.45
047.0	100.0000	0205.7	064.3	186.2	000.2500	0059.1	011.6	57.52
048.0	100.0000	0205.7	064.3	182.3	000.2500	0062.1	012.4	56.72
049.0	100.0000	0206.0	064.4	178.9	000.2500	0063.9	013.2	55.75
050.0	100.0000	0206.6	064.4	175.8	000.2500	0067.2	014.1	55.01
051.0	100.0000	0207.2	064.5	173.2	000.2500	0067.6	015.0	53.98
052.0	100.0000	0207.4	064.5	171.0	000.2500	0066.7	015.9	53.23
053.0	100.0000	0207.3	064.5	169.2	000.2500	0066.4	016.9	52.32
054.0	100.0000	0207.0	064.5	167.8	000.2500	0067.1	018.0	51.51
055.0	100.0000	0206.9	064.5	166.5	000.2500	0067.5	019.0	50.68
056.0	100.0000	0207.4	064.5	165.2	000.2500	0067.8	020.0	49.85
057.0	100.0000	0208.2	064.6	164.1	000.2500	0068.6	021.1	49.11
058.0	100.0000	0208.8	064.6	163.1	000.2500	0069.8	022.2	48.40
059.0	100.0000	0209.0	064.7	162.4	000.2500	0071.0	023.3	47.71
060.0	100.0000	0208.6	064.6	161.9	000.2500	0071.9	024.4	47.00
061.0	100.0000	0208.1	064.6	161.5	000.2500	0072.6	025.5	46.29
062.0	100.0000	0207.9	064.5	161.2	000.2500	0073.2	026.6	45.61
063.0	100.0000	0207.9	064.5	160.8	000.2500	0073.8	027.7	44.96
064.0	100.0000	0208.2	064.6	160.5	000.2500	0074.3	028.8	44.35
065.0	100.0000	0208.5	064.6	160.2	000.2500	0074.6	030.0	43.76

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
066.0	100.0000	0208.5	064.6		160.1	000.2500	0074.9	031.1	43.20
067.0	100.0000	0208.7	064.6		159.9	000.2500	0075.1	032.2	42.68
068.0	100.0000	0208.9	064.6		159.8	000.2500	0075.2	033.3	42.19
069.0	100.0000	0209.1	064.7		159.8	000.2500	0075.3	034.5	41.69
070.0	100.0000	0209.2	064.7		159.8	000.2500	0075.3	035.6	41.20
071.0	100.0000	0209.2	064.7		159.8	000.2500	0075.3	036.7	40.71
072.0	100.0000	0209.1	064.7		159.9	000.2500	0075.2	037.8	40.23
073.0	100.0000	0209.3	064.7		159.9	000.2500	0075.1	039.0	39.76
074.0	100.0000	0209.8	064.7		160.0	000.2500	0075.0	040.1	39.29
075.0	100.0000	0211.0	064.8		160.0	000.2500	0075.0	041.2	38.85
076.0	100.0000	0212.8	065.0		159.9	000.2500	0075.1	042.4	38.42
077.0	100.0000	0215.1	065.2		159.8	000.2500	0075.3	043.5	37.99
078.0	100.0000	0217.4	065.4		159.7	000.2500	0075.3	044.7	37.57
079.0	100.0000	0218.9	065.6		159.8	000.2500	0075.3	045.8	37.15
080.0	100.0000	0219.5	065.6		160.0	000.2500	0075.0	047.0	36.73
081.0	100.0000	0219.5	065.6		160.2	000.2500	0074.7	048.1	36.30
082.0	100.0000	0219.4	065.6		160.5	000.2500	0074.2	049.2	35.89
083.0	100.0000	0218.9	065.6		160.8	000.2500	0073.7	050.3	35.46
084.0	100.0000	0218.7	065.5		161.1	000.2500	0073.2	051.4	35.03
085.0	100.0000	0218.8	065.6		161.4	000.2500	0072.7	052.6	34.61
086.0	100.0000	0218.6	065.5		161.8	000.2500	0072.2	053.7	34.18
087.0	100.0000	0218.3	065.5		162.1	000.2500	0071.5	054.8	33.75
088.0	100.0000	0217.0	065.4		162.5	000.2500	0070.7	055.8	33.33
089.0	100.0000	0215.6	065.3		163.0	000.2500	0070.0	056.9	32.91
090.0	100.0000	0214.3	065.1		163.4	000.2500	0069.4	057.9	32.52
091.0	100.0000	0213.0	065.0		163.9	000.2500	0068.9	059.0	32.14
092.0	100.0000	0211.8	064.9		164.3	000.2500	0068.4	060.0	31.78
093.0	100.0000	0210.7	064.8		164.7	000.2500	0068.1	061.1	31.44
094.0	100.0000	0209.5	064.7		165.2	000.2500	0067.8	062.1	31.11
095.0	100.0000	0207.8	064.5		165.6	000.2500	0067.7	063.1	30.81
096.0	100.0000	0206.1	064.4		166.1	000.2500	0067.5	064.1	30.52
097.0	100.0000	0204.2	064.2		166.6	000.2500	0067.4	065.1	30.25
098.0	100.0000	0202.5	064.0		167.1	000.2500	0067.3	066.1	29.98
099.0	100.0000	0201.5	063.9		167.5	000.2500	0067.2	067.1	29.70
100.0	100.0000	0201.0	063.9		167.9	000.2500	0067.0	068.1	29.42

Contour-to-Contour Map, Proposed vs AL3621
Coloff Media, Inc.

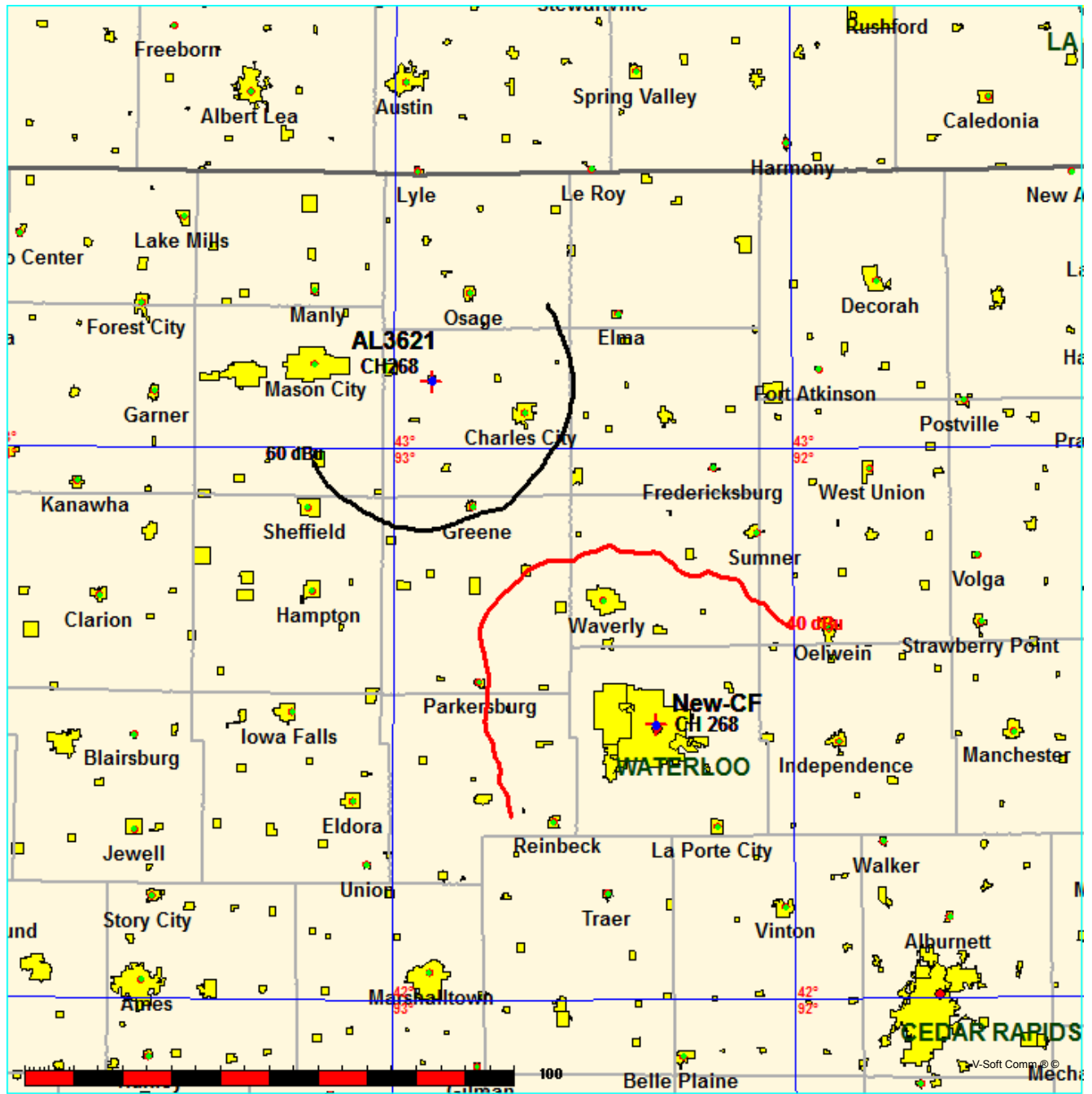
FMCommander Single Allocation Study - 01-24-2018 - GLOBE 30 Sec
New-CF's Overlaps (In= -16.7 km, Out= 13.61 km)

New-CF CH 268 D

Lat= 42 30 08.0, Lng= 92 20 27.0
0.25 kW 68.8 m HAAT, 347.4 m COR
Prot.= 60 dBu, Intef.= 40 dBu

AL3621 CH 268 A RM

Lat= 43 07 34.0, Lng= 92 54 20.0
6.0 kW 100 m HAAT, 436 m COR
Prot.= 60 dBu, Intef.= 40 dBu



01-24-2018

Terrain Data: GLOBE 30 Sec

FMOver Analysis

K265EH BLFT20110727AGU

New-CF

Channel = 265D

Max ERP = 0.17 kW

RCAMSL = 407 m

N. Lat. 42 45 27.0

W. Lng. 92 26 03.0

Protected

60 dBu

Channel = 268D

Max ERP = 0.25 kW

RCAMSL = 347.4 m

N. Lat. 42 30 08.0

W. Lng. 92 20 27.0

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
105.0	000.1700	0096.2	011.5	007.8	000.2500	0052.0	025.6	43.39	
106.0	000.1700	0096.7	011.5	007.8	000.2500	0052.0	025.4	43.53	
107.0	000.1700	0097.0	011.6	007.8	000.2500	0052.0	025.2	43.68	
108.0	000.1700	0097.3	011.6	007.8	000.2500	0052.1	025.0	43.83	
109.0	000.1700	0097.7	011.6	007.7	000.2500	0052.1	024.8	43.98	
110.0	000.1700	0097.9	011.6	007.7	000.2500	0052.2	024.6	44.14	
111.0	000.1700	0098.1	011.6	007.6	000.2500	0052.3	024.4	44.30	
112.0	000.1700	0098.4	011.6	007.5	000.2500	0052.5	024.2	44.47	
113.0	000.1700	0098.7	011.6	007.4	000.2500	0052.6	024.0	44.63	
114.0	000.1700	0099.0	011.7	007.3	000.2500	0052.7	023.8	44.81	
115.0	000.1700	0099.3	011.7	007.2	000.2500	0052.9	023.6	44.98	
116.0	000.1700	0099.7	011.7	007.1	000.2500	0053.0	023.4	45.16	
117.0	000.1700	0100.0	011.7	007.0	000.2500	0053.2	023.2	45.34	
118.0	000.1700	0100.2	011.7	006.8	000.2500	0053.5	023.0	45.53	
119.0	000.1700	0100.2	011.7	006.6	000.2500	0053.7	022.8	45.72	
120.0	000.1700	0100.1	011.7	006.4	000.2500	0054.0	022.7	45.90	
121.0	000.1700	0099.9	011.7	006.2	000.2500	0054.3	022.5	46.10	
122.0	000.1700	0099.8	011.7	005.9	000.2500	0054.6	022.3	46.29	
123.0	000.1700	0099.9	011.7	005.7	000.2500	0054.8	022.1	46.47	
124.0	000.1700	0100.2	011.7	005.5	000.2500	0055.1	021.9	46.65	
125.0	000.1700	0100.4	011.7	005.3	000.2500	0055.3	021.7	46.84	
126.0	000.1700	0100.5	011.8	005.0	000.2500	0055.5	021.5	47.02	
127.0	000.1700	0100.6	011.8	004.7	000.2500	0055.8	021.4	47.20	
128.0	000.1700	0100.9	011.8	004.5	000.2500	0056.0	021.2	47.38	
129.0	000.1700	0101.3	011.8	004.2	000.2500	0056.3	021.0	47.57	
130.0	000.1700	0101.6	011.8	003.9	000.2500	0056.6	020.8	47.77	
131.0	000.1700	0101.9	011.8	003.6	000.2500	0057.0	020.7	47.96	
132.0	000.1700	0102.0	011.8	003.3	000.2500	0057.5	020.5	48.17	
133.0	000.1700	0102.3	011.8	002.9	000.2500	0058.1	020.3	48.39	
134.0	000.1700	0103.0	011.9	002.6	000.2500	0058.6	020.1	48.61	
135.0	000.1700	0103.8	011.9	002.3	000.2500	0059.1	020.0	48.84	
136.0	000.1700	0104.3	012.0	002.0	000.2500	0059.6	019.8	49.05	
137.0	000.1700	0104.5	012.0	001.6	000.2500	0060.2	019.6	49.26	
138.0	000.1700	0104.7	012.0	001.1	000.2500	0060.4	019.5	49.42	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
139.0	000.1700	0105.1	012.0	000.7	000.2500	0060.6	019.3	49.57
140.0	000.1700	0105.7	012.0	000.3	000.2500	0060.8	019.2	49.72
141.0	000.1700	0106.3	012.1	359.9	000.2500	0060.9	019.0	49.88
142.0	000.1700	0106.9	012.1	359.4	000.2500	0061.1	018.8	50.03
143.0	000.1700	0106.9	012.1	358.9	000.2500	0061.3	018.7	50.16
144.0	000.1700	0106.1	012.1	358.3	000.2500	0061.3	018.6	50.24
145.0	000.1700	0105.0	012.0	357.7	000.2500	0061.3	018.6	50.29
146.0	000.1700	0104.7	012.0	357.1	000.2500	0061.4	018.5	50.38
147.0	000.1700	0105.1	012.0	356.6	000.2500	0061.3	018.3	50.48
148.0	000.1700	0105.5	012.0	356.0	000.2500	0061.2	018.2	50.57
149.0	000.1700	0105.7	012.0	355.5	000.2500	0061.3	018.1	50.67
150.0	000.1700	0105.8	012.0	354.9	000.2500	0061.2	018.0	50.74
151.0	000.1700	0106.3	012.1	354.3	000.2500	0061.1	017.9	50.82
152.0	000.1700	0107.3	012.1	353.7	000.2500	0061.2	017.8	50.94
153.0	000.1700	0108.3	012.2	353.2	000.2500	0061.5	017.7	51.08
154.0	000.1700	0109.0	012.2	352.5	000.2500	0062.1	017.6	51.26
155.0	000.1700	0109.5	012.2	351.9	000.2500	0062.7	017.5	51.40
156.0	000.1700	0109.6	012.2	351.2	000.2500	0063.2	017.4	51.52
157.0	000.1700	0109.9	012.3	350.6	000.2500	0063.4	017.3	51.61
158.0	000.1700	0110.2	012.3	349.9	000.2500	0063.5	017.3	51.68
159.0	000.1700	0110.0	012.3	349.2	000.2500	0063.8	017.2	51.74
160.0	000.1700	0109.3	012.2	348.5	000.2500	0064.5	017.2	51.82
161.0	000.1700	0108.8	012.2	347.7	000.2500	0065.3	017.2	51.92
162.0	000.1700	0109.2	012.2	347.0	000.2500	0066.5	017.2	52.10
163.0	000.1700	0110.5	012.3	346.3	000.2500	0068.0	017.1	52.35
164.0	000.1700	0112.0	012.4	345.6	000.2500	0069.5	017.0	52.60
165.0	000.1700	0113.1	012.4	344.9	000.2500	0070.5	017.0	52.77
166.0	000.1700	0113.2	012.4	344.2	000.2500	0070.8	017.0	52.81
167.0	000.1700	0112.7	012.4	343.5	000.2500	0070.7	017.0	52.76
168.0	000.1700	0112.7	012.4	342.7	000.2500	0070.4	017.0	52.71
169.0	000.1700	0112.9	012.4	342.0	000.2500	0070.1	017.0	52.67
170.0	000.1700	0113.3	012.4	341.3	000.2500	0069.9	017.0	52.64
171.0	000.1700	0114.2	012.5	340.5	000.2500	0070.0	017.0	52.65
172.0	000.1700	0115.9	012.6	339.7	000.2500	0070.1	017.0	52.70
173.0	000.1700	0117.4	012.6	339.0	000.2500	0070.4	017.0	52.76
174.0	000.1700	0118.8	012.7	338.2	000.2500	0070.6	017.0	52.80
175.0	000.1700	0120.3	012.8	337.4	000.2500	0070.9	016.9	52.84
176.0	000.1700	0121.6	012.9	336.6	000.2500	0071.2	017.0	52.86
177.0	000.1700	0123.0	012.9	335.8	000.2500	0071.3	017.0	52.85
178.0	000.1700	0124.1	013.0	335.0	000.2500	0071.0	017.0	52.79
179.0	000.1700	0124.8	013.0	334.3	000.2500	0070.6	017.1	52.69
180.0	000.1700	0125.4	013.0	333.6	000.2500	0070.3	017.1	52.60
181.0	000.1700	0126.0	013.1	332.8	000.2500	0070.3	017.2	52.53
182.0	000.1700	0126.5	013.1	332.1	000.2500	0070.8	017.3	52.52
183.0	000.1700	0126.8	013.1	331.5	000.2500	0071.7	017.4	52.53
184.0	000.1700	0126.9	013.1	330.8	000.2500	0072.7	017.5	52.54
185.0	000.1700	0126.4	013.1	330.2	000.2500	0073.7	017.7	52.53
186.0	000.1700	0126.0	013.1	329.7	000.2500	0074.6	017.8	52.51
187.0	000.1700	0125.5	013.0	329.2	000.2500	0075.4	018.0	52.47
188.0	000.1700	0125.5	013.0	328.6	000.2500	0076.3	018.1	52.45
189.0	000.1700	0125.9	013.1	328.0	000.2500	0077.2	018.3	52.44

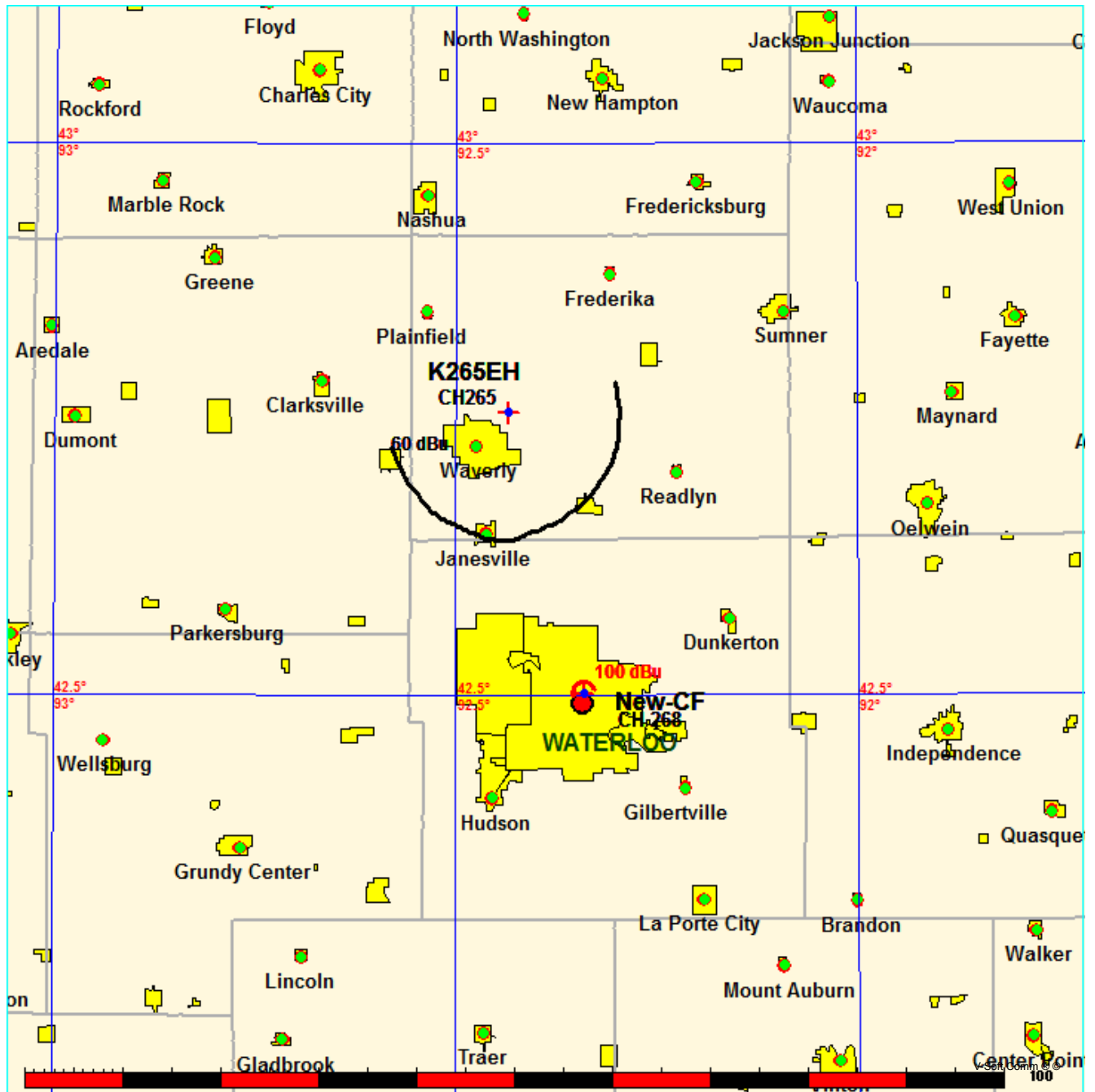
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
190.0	000.1700	0126.3	013.1	327.4	000.2500	0078.1	018.4	52.42
191.0	000.1700	0126.1	013.1	326.9	000.2500	0078.8	018.6	52.37
192.0	000.1700	0125.4	013.0	326.5	000.2500	0079.4	018.7	52.27
193.0	000.1700	0123.9	013.0	326.2	000.2500	0079.8	019.0	52.14
194.0	000.1700	0122.2	012.9	325.9	000.2500	0080.2	019.2	52.00
195.0	000.1700	0121.0	012.8	325.6	000.2500	0080.5	019.4	51.87
196.0	000.1700	0120.8	012.8	325.2	000.2500	0081.0	019.6	51.77
197.0	000.1700	0121.3	012.8	324.7	000.2500	0081.3	019.7	51.68
198.0	000.1700	0121.7	012.9	324.3	000.2500	0081.7	019.9	51.58
199.0	000.1700	0121.4	012.8	324.0	000.2500	0081.9	020.1	51.45
200.0	000.1700	0120.6	012.8	323.7	000.2500	0082.0	020.3	51.30
201.0	000.1700	0119.5	012.8	323.5	000.2500	0082.1	020.5	51.14
202.0	000.1700	0118.8	012.7	323.2	000.2500	0082.3	020.7	50.98
203.0	000.1700	0118.4	012.7	323.0	000.2500	0082.4	020.9	50.84
204.0	000.1700	0118.2	012.7	322.7	000.2500	0082.5	021.1	50.70
205.0	000.1700	0118.5	012.7	322.4	000.2500	0082.7	021.3	50.56
206.0	000.1700	0118.8	012.7	322.1	000.2500	0082.8	021.5	50.43
207.0	000.1700	0119.0	012.7	321.8	000.2500	0083.0	021.7	50.29
208.0	000.1700	0119.3	012.7	321.6	000.2500	0083.1	021.9	50.15
209.0	000.1700	0119.8	012.8	321.3	000.2500	0083.2	022.1	50.01
210.0	000.1700	0120.2	012.8	321.0	000.2500	0083.3	022.3	49.87
211.0	000.1700	0120.2	012.8	320.8	000.2500	0083.4	022.5	49.72
212.0	000.1700	0120.1	012.8	320.6	000.2500	0083.5	022.7	49.57
213.0	000.1700	0120.2	012.8	320.4	000.2500	0083.6	022.9	49.42
214.0	000.1700	0120.5	012.8	320.3	000.2500	0083.6	023.1	49.27
215.0	000.1700	0120.5	012.8	320.1	000.2500	0083.7	023.3	49.11
216.0	000.1700	0120.4	012.8	320.0	000.2500	0083.7	023.6	48.96
217.0	000.1700	0120.6	012.8	319.8	000.2500	0083.8	023.8	48.80
218.0	000.1700	0120.7	012.8	319.7	000.2500	0083.8	024.0	48.65
219.0	000.1700	0120.4	012.8	319.6	000.2500	0083.8	024.2	48.49
220.0	000.1700	0119.6	012.8	319.6	000.2500	0083.8	024.4	48.33
221.0	000.1700	0118.6	012.7	319.7	000.2500	0083.8	024.7	48.16
222.0	000.1700	0117.8	012.7	319.7	000.2500	0083.8	024.9	48.00
223.0	000.1700	0117.4	012.6	319.7	000.2500	0083.8	025.1	47.85
224.0	000.1700	0117.3	012.6	319.6	000.2500	0083.8	025.3	47.69

Contour-to-Contour Map, Proposed vs K265EH
Coloff Media, Inc.

FMCommander Single Allocation Study - 01-24-2018 - GLOBE 30 Sec
New-CF's Overlaps (In= 17.53 km, Out= 15.84 km)

New-CF CH 268 D
Lat= 42 30 08.0, Lng= 92 20 27.0
0.25 kW 68.8 m HAAT, 347.4 m COR
Prot.= 60 dBu, Intef.= 100 dBu

K265EH CH 265 D BLFT20110727AGU
Lat= 42 45 27.0, Lng= 92 26 03.0
0.17 kW 106.6 m HAAT, 407 m COR
Prot.= 60 dBu, Intef.= 100 dBu



01-24-2018

Terrain Data: GLOBE 30 Sec

FMOver Analysis

K265EH BLFT20110727AGU

New-CF

Channel = 265D

Max ERP = 0.17 kW

RCAMSL = 407 m

N. Lat. 42 45 27.0

W. Lng. 92 26 03.0

Protected

60 dBu

Channel = 268D

Max ERP = 0.25 kW

RCAMSL = 347.4 m

N. Lat. 42 30 08.0

W. Lng. 92 20 27.0

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
105.0	000.1700	0096.2	011.5	007.8	000.2500	0052.0	025.6	43.39	
106.0	000.1700	0096.7	011.5	007.8	000.2500	0052.0	025.4	43.53	
107.0	000.1700	0097.0	011.6	007.8	000.2500	0052.0	025.2	43.68	
108.0	000.1700	0097.3	011.6	007.8	000.2500	0052.1	025.0	43.83	
109.0	000.1700	0097.7	011.6	007.7	000.2500	0052.1	024.8	43.98	
110.0	000.1700	0097.9	011.6	007.7	000.2500	0052.2	024.6	44.14	
111.0	000.1700	0098.1	011.6	007.6	000.2500	0052.3	024.4	44.30	
112.0	000.1700	0098.4	011.6	007.5	000.2500	0052.5	024.2	44.47	
113.0	000.1700	0098.7	011.6	007.4	000.2500	0052.6	024.0	44.63	
114.0	000.1700	0099.0	011.7	007.3	000.2500	0052.7	023.8	44.81	
115.0	000.1700	0099.3	011.7	007.2	000.2500	0052.9	023.6	44.98	
116.0	000.1700	0099.7	011.7	007.1	000.2500	0053.0	023.4	45.16	
117.0	000.1700	0100.0	011.7	007.0	000.2500	0053.2	023.2	45.34	
118.0	000.1700	0100.2	011.7	006.8	000.2500	0053.5	023.0	45.53	
119.0	000.1700	0100.2	011.7	006.6	000.2500	0053.7	022.8	45.72	
120.0	000.1700	0100.1	011.7	006.4	000.2500	0054.0	022.7	45.90	
121.0	000.1700	0099.9	011.7	006.2	000.2500	0054.3	022.5	46.10	
122.0	000.1700	0099.8	011.7	005.9	000.2500	0054.6	022.3	46.29	
123.0	000.1700	0099.9	011.7	005.7	000.2500	0054.8	022.1	46.47	
124.0	000.1700	0100.2	011.7	005.5	000.2500	0055.1	021.9	46.65	
125.0	000.1700	0100.4	011.7	005.3	000.2500	0055.3	021.7	46.84	
126.0	000.1700	0100.5	011.8	005.0	000.2500	0055.5	021.5	47.02	
127.0	000.1700	0100.6	011.8	004.7	000.2500	0055.8	021.4	47.20	
128.0	000.1700	0100.9	011.8	004.5	000.2500	0056.0	021.2	47.38	
129.0	000.1700	0101.3	011.8	004.2	000.2500	0056.3	021.0	47.57	
130.0	000.1700	0101.6	011.8	003.9	000.2500	0056.6	020.8	47.77	
131.0	000.1700	0101.9	011.8	003.6	000.2500	0057.0	020.7	47.96	
132.0	000.1700	0102.0	011.8	003.3	000.2500	0057.5	020.5	48.17	
133.0	000.1700	0102.3	011.8	002.9	000.2500	0058.1	020.3	48.39	
134.0	000.1700	0103.0	011.9	002.6	000.2500	0058.6	020.1	48.61	
135.0	000.1700	0103.8	011.9	002.3	000.2500	0059.1	020.0	48.84	
136.0	000.1700	0104.3	012.0	002.0	000.2500	0059.6	019.8	49.05	
137.0	000.1700	0104.5	012.0	001.6	000.2500	0060.2	019.6	49.26	
138.0	000.1700	0104.7	012.0	001.1	000.2500	0060.4	019.5	49.42	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
139.0	000.1700	0105.1	012.0	000.7	000.2500	0060.6	019.3	49.57
140.0	000.1700	0105.7	012.0	000.3	000.2500	0060.8	019.2	49.72
141.0	000.1700	0106.3	012.1	359.9	000.2500	0060.9	019.0	49.88
142.0	000.1700	0106.9	012.1	359.4	000.2500	0061.1	018.8	50.03
143.0	000.1700	0106.9	012.1	358.9	000.2500	0061.3	018.7	50.16
144.0	000.1700	0106.1	012.1	358.3	000.2500	0061.3	018.6	50.24
145.0	000.1700	0105.0	012.0	357.7	000.2500	0061.3	018.6	50.29
146.0	000.1700	0104.7	012.0	357.1	000.2500	0061.4	018.5	50.38
147.0	000.1700	0105.1	012.0	356.6	000.2500	0061.3	018.3	50.48
148.0	000.1700	0105.5	012.0	356.0	000.2500	0061.2	018.2	50.57
149.0	000.1700	0105.7	012.0	355.5	000.2500	0061.3	018.1	50.67
150.0	000.1700	0105.8	012.0	354.9	000.2500	0061.2	018.0	50.74
151.0	000.1700	0106.3	012.1	354.3	000.2500	0061.1	017.9	50.82
152.0	000.1700	0107.3	012.1	353.7	000.2500	0061.2	017.8	50.94
153.0	000.1700	0108.3	012.2	353.2	000.2500	0061.5	017.7	51.08
154.0	000.1700	0109.0	012.2	352.5	000.2500	0062.1	017.6	51.26
155.0	000.1700	0109.5	012.2	351.9	000.2500	0062.7	017.5	51.40
156.0	000.1700	0109.6	012.2	351.2	000.2500	0063.2	017.4	51.52
157.0	000.1700	0109.9	012.3	350.6	000.2500	0063.4	017.3	51.61
158.0	000.1700	0110.2	012.3	349.9	000.2500	0063.5	017.3	51.68
159.0	000.1700	0110.0	012.3	349.2	000.2500	0063.8	017.2	51.74
160.0	000.1700	0109.3	012.2	348.5	000.2500	0064.5	017.2	51.82
161.0	000.1700	0108.8	012.2	347.7	000.2500	0065.3	017.2	51.92
162.0	000.1700	0109.2	012.2	347.0	000.2500	0066.5	017.2	52.10
163.0	000.1700	0110.5	012.3	346.3	000.2500	0068.0	017.1	52.35
164.0	000.1700	0112.0	012.4	345.6	000.2500	0069.5	017.0	52.60
165.0	000.1700	0113.1	012.4	344.9	000.2500	0070.5	017.0	52.77
166.0	000.1700	0113.2	012.4	344.2	000.2500	0070.8	017.0	52.81
167.0	000.1700	0112.7	012.4	343.5	000.2500	0070.7	017.0	52.76
168.0	000.1700	0112.7	012.4	342.7	000.2500	0070.4	017.0	52.71
169.0	000.1700	0112.9	012.4	342.0	000.2500	0070.1	017.0	52.67
170.0	000.1700	0113.3	012.4	341.3	000.2500	0069.9	017.0	52.64
171.0	000.1700	0114.2	012.5	340.5	000.2500	0070.0	017.0	52.65
172.0	000.1700	0115.9	012.6	339.7	000.2500	0070.1	017.0	52.70
173.0	000.1700	0117.4	012.6	339.0	000.2500	0070.4	017.0	52.76
174.0	000.1700	0118.8	012.7	338.2	000.2500	0070.6	017.0	52.80
175.0	000.1700	0120.3	012.8	337.4	000.2500	0070.9	016.9	52.84
176.0	000.1700	0121.6	012.9	336.6	000.2500	0071.2	017.0	52.86
177.0	000.1700	0123.0	012.9	335.8	000.2500	0071.3	017.0	52.85
178.0	000.1700	0124.1	013.0	335.0	000.2500	0071.0	017.0	52.79
179.0	000.1700	0124.8	013.0	334.3	000.2500	0070.6	017.1	52.69
180.0	000.1700	0125.4	013.0	333.6	000.2500	0070.3	017.1	52.60
181.0	000.1700	0126.0	013.1	332.8	000.2500	0070.3	017.2	52.53
182.0	000.1700	0126.5	013.1	332.1	000.2500	0070.8	017.3	52.52
183.0	000.1700	0126.8	013.1	331.5	000.2500	0071.7	017.4	52.53
184.0	000.1700	0126.9	013.1	330.8	000.2500	0072.7	017.5	52.54
185.0	000.1700	0126.4	013.1	330.2	000.2500	0073.7	017.7	52.53
186.0	000.1700	0126.0	013.1	329.7	000.2500	0074.6	017.8	52.51
187.0	000.1700	0125.5	013.0	329.2	000.2500	0075.4	018.0	52.47
188.0	000.1700	0125.5	013.0	328.6	000.2500	0076.3	018.1	52.45
189.0	000.1700	0125.9	013.1	328.0	000.2500	0077.2	018.3	52.44

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
190.0	000.1700	0126.3	013.1	327.4	000.2500	0078.1	018.4	52.42
191.0	000.1700	0126.1	013.1	326.9	000.2500	0078.8	018.6	52.37
192.0	000.1700	0125.4	013.0	326.5	000.2500	0079.4	018.7	52.27
193.0	000.1700	0123.9	013.0	326.2	000.2500	0079.8	019.0	52.14
194.0	000.1700	0122.2	012.9	325.9	000.2500	0080.2	019.2	52.00
195.0	000.1700	0121.0	012.8	325.6	000.2500	0080.5	019.4	51.87
196.0	000.1700	0120.8	012.8	325.2	000.2500	0081.0	019.6	51.77
197.0	000.1700	0121.3	012.8	324.7	000.2500	0081.3	019.7	51.68
198.0	000.1700	0121.7	012.9	324.3	000.2500	0081.7	019.9	51.58
199.0	000.1700	0121.4	012.8	324.0	000.2500	0081.9	020.1	51.45
200.0	000.1700	0120.6	012.8	323.7	000.2500	0082.0	020.3	51.30
201.0	000.1700	0119.5	012.8	323.5	000.2500	0082.1	020.5	51.14
202.0	000.1700	0118.8	012.7	323.2	000.2500	0082.3	020.7	50.98
203.0	000.1700	0118.4	012.7	323.0	000.2500	0082.4	020.9	50.84
204.0	000.1700	0118.2	012.7	322.7	000.2500	0082.5	021.1	50.70
205.0	000.1700	0118.5	012.7	322.4	000.2500	0082.7	021.3	50.56
206.0	000.1700	0118.8	012.7	322.1	000.2500	0082.8	021.5	50.43
207.0	000.1700	0119.0	012.7	321.8	000.2500	0083.0	021.7	50.29
208.0	000.1700	0119.3	012.7	321.6	000.2500	0083.1	021.9	50.15
209.0	000.1700	0119.8	012.8	321.3	000.2500	0083.2	022.1	50.01
210.0	000.1700	0120.2	012.8	321.0	000.2500	0083.3	022.3	49.87
211.0	000.1700	0120.2	012.8	320.8	000.2500	0083.4	022.5	49.72
212.0	000.1700	0120.1	012.8	320.6	000.2500	0083.5	022.7	49.57
213.0	000.1700	0120.2	012.8	320.4	000.2500	0083.6	022.9	49.42
214.0	000.1700	0120.5	012.8	320.3	000.2500	0083.6	023.1	49.27
215.0	000.1700	0120.5	012.8	320.1	000.2500	0083.7	023.3	49.11
216.0	000.1700	0120.4	012.8	320.0	000.2500	0083.7	023.6	48.96
217.0	000.1700	0120.6	012.8	319.8	000.2500	0083.8	023.8	48.80
218.0	000.1700	0120.7	012.8	319.7	000.2500	0083.8	024.0	48.65
219.0	000.1700	0120.4	012.8	319.6	000.2500	0083.8	024.2	48.49
220.0	000.1700	0119.6	012.8	319.6	000.2500	0083.8	024.4	48.33
221.0	000.1700	0118.6	012.7	319.7	000.2500	0083.8	024.7	48.16
222.0	000.1700	0117.8	012.7	319.7	000.2500	0083.8	024.9	48.00
223.0	000.1700	0117.4	012.6	319.7	000.2500	0083.8	025.1	47.85
224.0	000.1700	0117.3	012.6	319.6	000.2500	0083.8	025.3	47.69