Doug Vernier
1600 Picturesque Dr.
Cedar Falls, Iowa 50613
Telecommunication Consultants

Comprehensive Engineering Statement

6/22/2020

This engineering STA application requests special temporary authorization for translator W209CJ due to a loss of site by the applicant. The existing site no longer has electricity and the lessor refuses to correct the problem.

The applicant proposes to move the transmitter and antenna of W209CJ

Old Coordinates (NAD 83):

N. Lat. 41-14-20.3

W. Lng. 73-42-44.40

Proposed New Coordinates (NAD 83):

N. Lat. 41-13-37.30

W. Lng. 73-42-57.40

Proposed COR AMSL, 110.6m

Elevation at the site, 97.5m

Tower height above ground, 13.5m

Antenna height C.O.R. above ground, 13.1 m

Antenna Type, Scala CA2-FM/CP – ERP 0.004 kW.

Page #2 through #5 of this statement is a contour-to-contour study at the proposed transmitter site using the proposed channel.

Page #6 through #10 of these exhibits is a satellite map showing the area where the tower is located and each of the pertinent protection radials. The reader will also find a table for each azimuth that shows the distance to and the heights of the interference signal as determined from standard U to D values.

Page #11 is a coverage map showing the 60 dBu of the proposed facility and that of the existing facility. Note that the proposed 60 dBu coverage contour is entirely contained within the existing 60 dBu coverage. The map shows that the proposed 60 dBu contour therefore overlaps with the existing 60 dBu contour, as is required under the rules.

Page #12 shows the azimuth pattern and table of the CA2-FM/CP rotated to 298 deg.

Page #13 is a narrative on how to read the allocation printout of Page #2.

Due to the minimal radiated power, this translator is considered categorically excluded from further R.F. hazard analysis.

Doug Vernier, Telecommunication Consultants
V-Soft Communications

Single Channel - Contour to Contour Study
Town Of Monroe, Connecticut

REFERENCE CH# 209D - 89.7 MHz, Pwr= 0.004 kW DA, HAAT= -33.1 M, COR= 110.6 M DISPLAY DATES
41 13 37.30 N. Average Protected F(50-50)= 2.54 km DATA 06-22-20
73 42 57.40 W. Standard Directional SEARCH 06-22-20

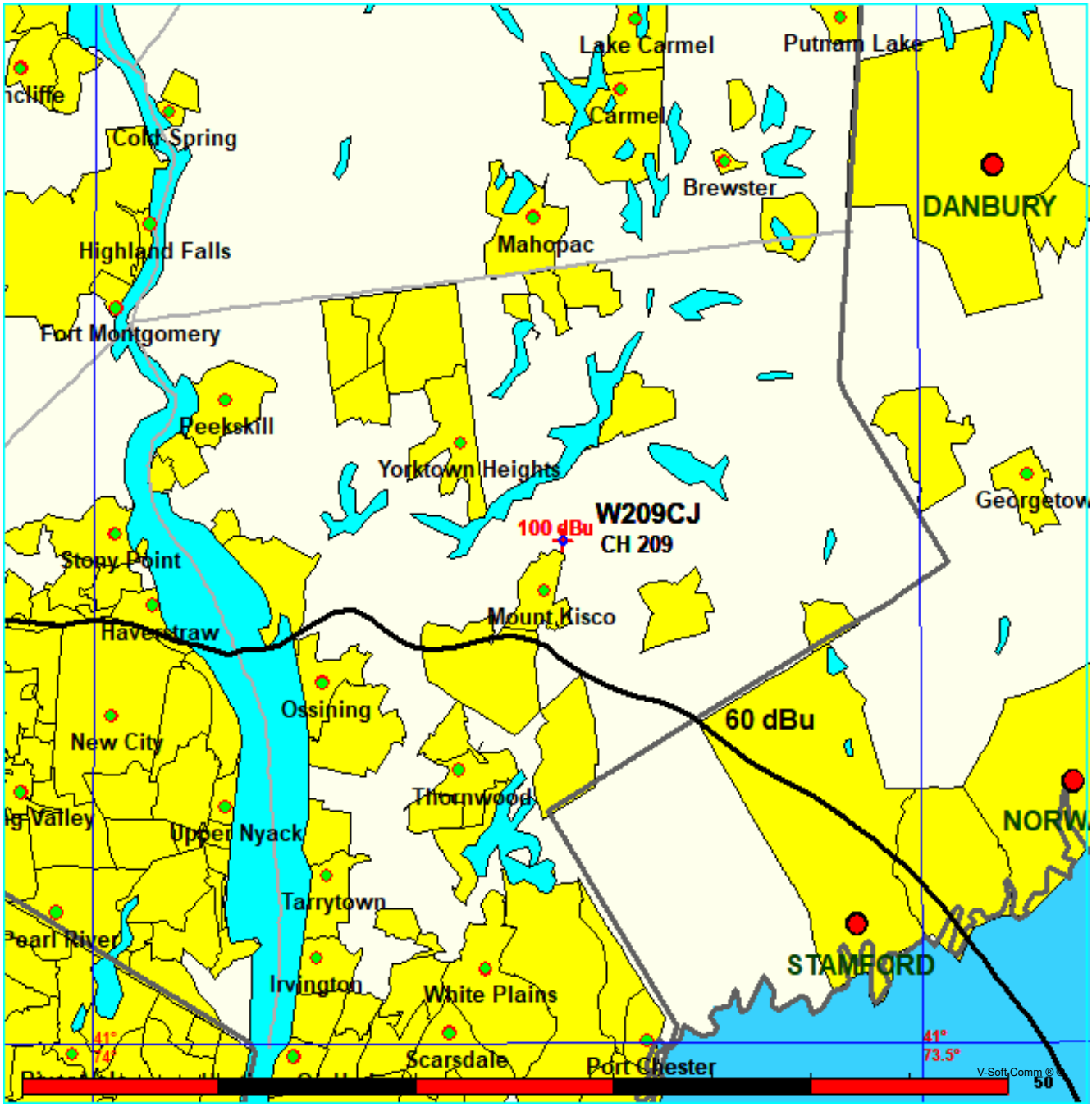
CH CITY	CALL STATE	TYPE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
209D Mount Kisco	W209CJ NY	LIC	___	12.8 192.8	1.36 BMLFT20110602ACX	41 14 20.30 73 42 44.40	0.038 33	166	---Reference--- Town Of Monroe, Connecticu	
212A Ossining	WQXW NY	LIC	D__	215.0 35.0	10.17 BMLED20140401ACT	41 09 07.30 73 47 08.40	0.250 145	1.1 244	13.8 New York Public Radio	-3.6*<**
206B U New York		VAC	__N	201.8 21.7	57.09	40 45 00.37 73 58 05.50	50.000 150	5.9 166	51.8	5.2
208B Bridgeport	WPKN CT	LIC	D__	82.4 262.8	44.74 BMLED20060201AYV	41 16 44.30 73 11 06.40	10.000 169	46.6 253	30.3 Wpkn, Inc.	12.6
207B1 WLJP Monroe	NY	APP	DH_	295.7 115.4	39.01 0000112485	41 22 42.30 74 08 14.50	1.600 283	1.3 494	24.5 Sound Of Life, Inc.	14.0
207B1 WLJP Monroe	NY	CP	D__	295.7 115.4	39.01 BPED20170414ADH	41 22 42.30 74 08 14.50	1.600 283	1.3 494	24.5 Sound Of Life, Inc.	14.0
211A WPUT North Salem	NY	APP	D__	33.7 213.8	21.03 0000115866	41 23 03.30 73 34 33.40	1.000 -27	0.8 160	6.0 Foothills Public Radio, In	14.1
206B1 WFDU Teaneck	NJ	LIC	D__	210.4 30.3	34.27 BLED20151103AYC	40 57 39.40 73 55 21.50	3.000 195	1.2 236	17.9 Fairleigh Dickinson Univer	14.9
211A WPUT North Salem	NY	LIC	D__	33.7 213.8	21.03 BLED20120628AAJ	41 23 03.30 73 34 33.40	0.440 -13	0.5 160	4.6 Foothills Public Radio, In	15.7
211D W211AI Stamford	CT	LIC	D__	145.7 325.8	24.09 BLFT19940317TI	41 02 52.30 73 33 14.40	0.250 29	1.1 65	7.0 Sacred Heart University, I	17.0
207A WLJP Monroe	NY	LIC	___	295.7 115.4	39.01 BLED20130503ACB	41 22 42.30 74 08 14.50	0.200 283	1.0 494	21.4 Sound Of Life, Inc.	17.5
211D W211AI Stamford	CT	CP	DH_	141.5 321.6	25.56 0000105384	41 02 49.00 73 31 34.00	0.250 29	1.1 91	7.1 Sacred Heart University, I	18.4
06 -- WNYZ-LP« New York	NY	CP	D_N	199.8 19.6	56.64 BDFCDVL-20150120AI	44 31 32.10 72 48 56.40	3.000 213	0.1	24.3	24.4R 32.2M
06+-- WNYZ-LP« New York	NY	LI	D_N	199.8 19.6	56.64 BLTVL-20080128ACC	44 31 32.10 72 48 56.40	3.000 213	0.1	24.0	24.1R 32.6M

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= East Zone, Co to 3rd adjacent.
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.
<** WQWX is protected using standard U to D ratio for 3rd adjacent,

FMCommander Single Allocation Study - 06-22-2020 - GLOBE 30 Sec
W209CJ's Overlaps (In= 49.57 km, Out= 5.22 km)

W209CJ CH 209 D DA
Lat= 41 13 37.30, Lng= 73 42 57.40
0.004 kW -33.1 m HAAT, 110.6 m COR
Prot.= 60 dBu, Intef.= 100 dBu

U-N- CH 206 B
Lat= 40 45 00.37, Lng= 73 58 05.50
50.0 kW 150 m HAAT, 165.6 m COR
Prot.= 60 dBu, Intef.= 100 dBu



06-22-2020 Terrain Data: GLOBE 30 Sec FMOver Analysis

U

Channel = 206B
Max ERP = 50 kW
RCAMSL = 165.62 m
N. Lat. 40 45 00.37
W. Lng. 73 58 05.50
Protected
60 dBu

W209CJ

Channel = 209D
Max ERP = 0.004 kW
RCAMSL = 110.6 m
N. Lat. 41 13 37.30
W. Lng. 73 42 57.40
Interfering
100 dBu

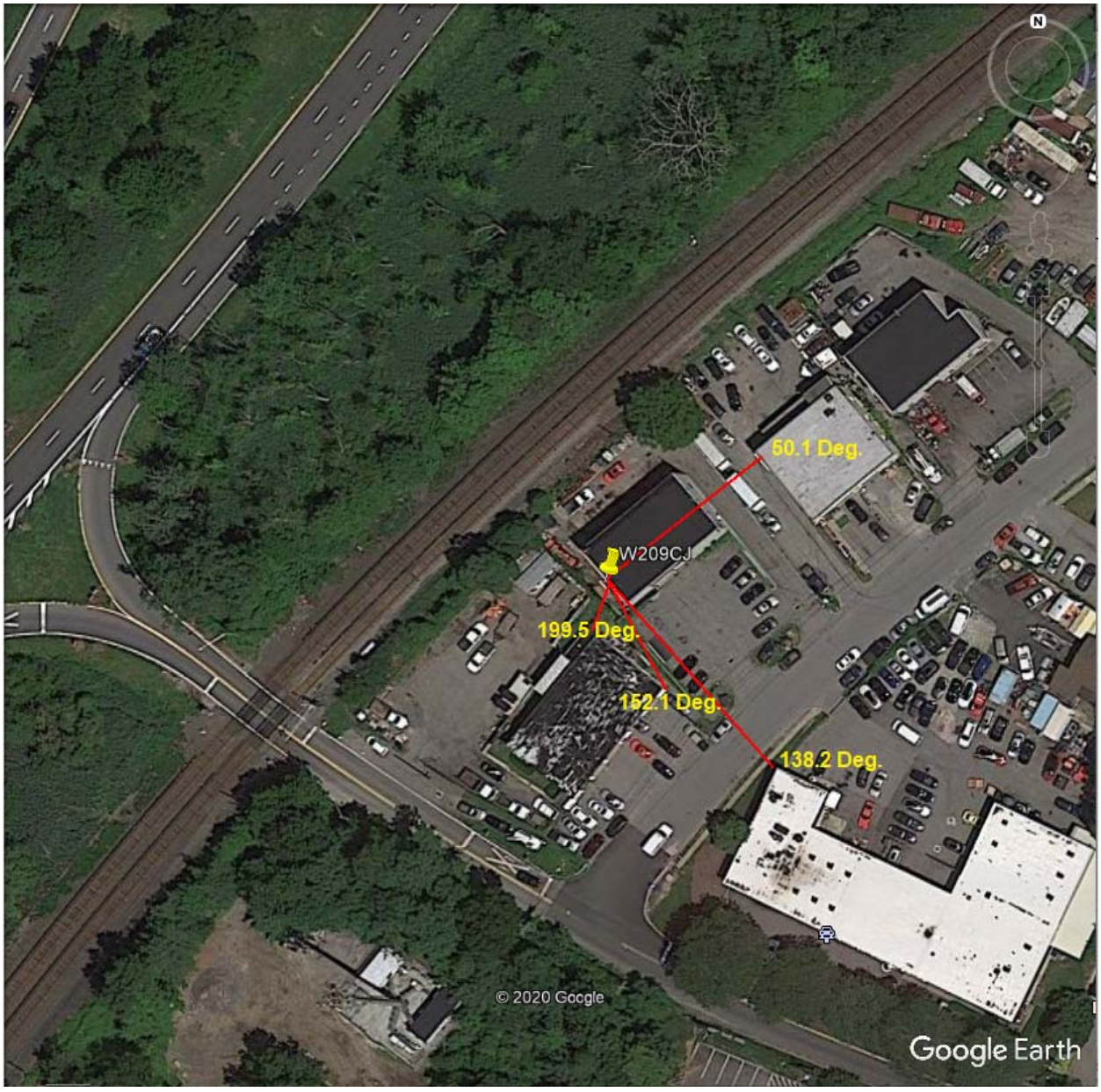
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
322.0	050.0000	0144.4	051.4	256.8	000.0001	0011.0	054.2	-06.15	
323.0	050.0000	0144.2	051.4	257.2	000.0001	0010.8	053.4	-05.99	
324.0	050.0000	0144.7	051.5	257.7	000.0001	0010.8	052.6	-05.85	
325.0	050.0000	0145.6	051.6	258.2	000.0001	0011.2	051.8	-05.72	
326.0	050.0000	0146.0	051.7	258.6	000.0001	0011.8	051.0	-05.60	
327.0	050.0000	0146.1	051.7	259.0	000.0001	0012.6	050.2	-05.47	
328.0	050.0000	0146.5	051.7	259.4	000.0001	0013.2	049.4	-05.32	
329.0	050.0000	0147.1	051.8	259.9	000.0001	0013.4	048.6	-05.18	
330.0	050.0000	0147.4	051.9	260.3	000.0001	0013.0	047.7	-04.91	
331.0	050.0000	0147.3	051.8	260.7	000.0001	0012.1	046.9	-04.63	
332.0	050.0000	0146.8	051.8	261.0	000.0001	0011.2	046.0	-04.34	
333.0	050.0000	0146.5	051.7	261.3	000.0001	0010.2	045.1	-04.05	
334.0	050.0000	0147.2	051.8	261.8	000.0001	0008.7	044.3	-03.71	
335.0	050.0000	0148.2	052.0	262.3	000.0001	0007.3	043.5	-03.38	
336.0	050.0000	0148.5	052.0	262.7	000.0001	0006.1	042.6	-03.07	
337.0	050.0000	0147.7	051.9	262.9	000.0001	0005.1	041.7	-02.77	
338.0	050.0000	0146.5	051.7	263.0	000.0001	0004.6	040.8	-02.47	
339.0	050.0000	0145.0	051.5	263.0	000.0001	0004.4	039.9	-02.17	
340.0	050.0000	0143.3	051.3	263.0	000.0001	0004.6	038.9	-01.88	
341.0	050.0000	0141.2	051.0	262.9	000.0001	0005.2	038.0	-01.60	
342.0	050.0000	0139.3	050.7	262.7	000.0001	0005.9	037.1	-01.31	
343.0	050.0000	0138.0	050.5	262.7	000.0001	0006.0	036.2	-01.00	
344.0	050.0000	0137.3	050.4	262.7	000.0001	0005.8	035.3	-00.67	
345.0	050.0000	0137.2	050.4	262.9	000.0001	0004.9	034.4	-00.32	
346.0	050.0000	0137.1	050.4	263.1	000.0001	0004.0	033.5	00.04	
347.0	050.0000	0136.4	050.3	263.1	000.0001	0004.1	032.7	00.38	
348.0	050.0000	0134.9	050.1	262.9	000.0001	0005.2	031.8	00.68	
349.0	050.0000	0132.8	049.8	262.4	000.0001	0007.0	030.9	00.98	
350.0	050.0000	0131.5	049.6	262.2	000.0001	0007.7	030.0	01.34	
351.0	050.0000	0130.9	049.5	262.0	000.0001	0008.0	029.1	01.76	
352.0	050.0000	0130.2	049.4	261.8	000.0001	0008.5	028.3	02.18	
353.0	050.0000	0128.9	049.3	261.4	000.0001	0009.7	027.4	02.57	
354.0	050.0000	0127.7	049.1	261.0	000.0001	0011.1	026.6	02.97	
355.0	050.0000	0126.6	048.9	260.5	000.0001	0012.7	025.7	03.38	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
356.0	050.0000	0127.1	049.0	260.5	000.0001	0012.7	024.9	03.95
357.0	050.0000	0127.2	049.0	260.3	000.0001	0013.0	024.0	04.49
358.0	050.0000	0126.6	048.9	259.8	000.0001	0013.4	023.2	05.01
359.0	050.0000	0125.9	048.8	259.2	000.0001	0012.9	022.4	05.65
000.0	050.0000	0123.9	048.5	258.1	000.0001	0011.1	021.6	06.37
001.0	050.0000	0121.7	048.2	256.7	000.0001	0011.0	020.8	07.04
002.0	050.0000	0119.3	047.9	255.2	000.0001	0011.1	020.1	07.70
003.0	050.0000	0118.7	047.8	254.2	000.0001	0011.1	019.3	08.37
004.0	050.0000	0117.4	047.6	252.8	000.0001	0011.1	018.6	09.04
005.0	050.0000	0116.5	047.5	251.4	000.0001	0009.1	017.9	09.71
006.0	050.0000	0118.4	047.8	251.1	000.0001	0008.3	017.0	10.46
007.0	050.0000	0119.0	047.8	250.1	000.0001	0004.5	016.3	11.18
008.0	050.0000	0121.3	048.2	249.8	000.0001	0003.2	015.4	11.99
009.0	050.0000	0126.3	048.9	250.6	000.0001	0006.7	014.3	13.08
010.0	050.0000	0131.4	049.6	251.6	000.0001	0009.5	013.2	14.46
011.0	050.0000	0136.3	050.3	252.4	000.0001	0010.8	012.1	15.99
012.0	050.0000	0138.5	050.6	251.6	000.0001	0009.6	011.1	17.49
013.0	050.0000	0136.5	050.3	247.9	000.0001	-0003.6	010.6	18.76
014.0	050.0000	0133.7	049.9	243.2	000.0001	-0007.4	010.1	20.00
015.0	050.0000	0131.5	049.6	238.4	000.0001	-0008.0	009.7	21.24
016.0	050.0000	0130.8	049.5	234.0	000.0001	-0014.1	009.2	22.56
017.0	050.0000	0131.7	049.7	229.9	000.0001	-0016.7	008.6	24.12
018.0	050.0000	0134.6	050.1	226.1	000.0001	-0028.6	007.8	25.70
019.0	050.0000	0138.7	050.7	221.9	000.0001	-0028.9	006.9	27.81
020.0	050.0000	0143.0	051.3	216.2	000.0001	-0027.2	006.1	29.75
021.0	050.0000	0146.2	051.7	208.3	000.0001	-0007.3	005.4	30.63
022.0	050.0000	0147.5	051.9	198.7	000.0001	-0031.7	005.2	29.68
023.0	050.0000	0147.0	051.8	189.2	000.0001	-0032.3	005.4	28.61
024.0	050.0000	0145.3	051.6	181.3	000.0001	-0049.6	006.0	27.82
025.0	050.0000	0144.0	051.4	174.7	000.0001	-0033.0	006.5	27.18
026.0	050.0000	0143.5	051.3	168.7	000.0001	-0049.7	007.1	26.50
027.0	050.0000	0143.4	051.3	163.5	000.0001	-0052.8	007.7	25.65
028.0	050.0000	0144.1	051.4	158.6	000.0001	-0060.3	008.3	24.87
029.0	050.0000	0145.9	051.6	153.6	000.0001	-0064.8	008.8	23.97
030.0	050.0000	0148.0	051.9	149.1	000.0001	-0059.5	009.4	22.88
031.0	050.0000	0149.3	052.1	145.8	000.0001	-0055.5	010.2	21.37
032.0	050.0000	0149.5	052.1	143.7	000.0001	-0046.7	011.0	19.83
033.0	050.0000	0149.1	052.1	142.4	000.0001	-0040.7	011.9	18.34
034.0	050.0000	0148.4	052.0	141.5	000.0001	-0037.9	012.8	16.95
035.0	050.0000	0147.9	051.9	140.7	000.0001	-0037.2	013.6	15.67
036.0	050.0000	0147.9	051.9	139.7	000.0001	-0037.6	014.5	14.51
037.0	050.0000	0148.5	052.0	138.7	000.0001	-0038.4	015.4	13.51
038.0	050.0000	0149.5	052.1	137.6	000.0001	-0038.4	016.3	12.62
039.0	050.0000	0151.0	052.3	136.5	000.0001	-0037.4	017.1	11.77
040.0	050.0000	0152.5	052.5	135.5	000.0001	-0035.9	018.0	10.93
041.0	050.0000	0153.5	052.7	134.9	000.0001	-0034.5	018.9	10.12
042.0	050.0000	0154.3	052.8	134.4	000.0001	-0033.5	019.8	09.31
043.0	050.0000	0155.0	052.8	134.1	000.0001	-0032.8	020.8	08.54
044.0	050.0000	0155.7	052.9	133.9	000.0001	-0032.1	021.7	07.79
045.0	050.0000	0156.5	053.0	133.6	000.0001	-0031.6	022.6	07.07
046.0	050.0000	0157.3	053.1	133.5	000.0001	-0031.3	023.5	06.38

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
047.0	050.0000	0157.9	053.2	133.4	000.0001	-0031.2	024.5	05.73
048.0	050.0000	0158.1	053.2	133.5	000.0001	-0031.4	025.4	05.11
049.0	050.0000	0158.1	053.2	133.7	000.0001	-0031.8	026.3	04.54
050.0	050.0000	0158.0	053.2	133.9	000.0001	-0032.4	027.2	04.00
051.0	050.0000	0157.8	053.2	134.2	000.0001	-0033.0	028.2	03.51
052.0	050.0000	0157.7	053.2	134.5	000.0001	-0033.6	029.1	03.05
053.0	050.0000	0157.6	053.2	134.7	000.0001	-0034.2	030.0	02.63
054.0	050.0000	0157.7	053.2	135.0	000.0001	-0034.8	030.9	02.24
055.0	050.0000	0158.1	053.2	135.2	000.0001	-0035.2	031.8	01.87
056.0	050.0000	0158.8	053.3	135.3	000.0001	-0035.5	032.8	01.52
057.0	050.0000	0159.4	053.4	135.5	000.0001	-0035.9	033.7	01.19
058.0	050.0000	0159.8	053.4	135.8	000.0001	-0036.3	034.6	00.87
059.0	050.0000	0159.9	053.5	136.1	000.0001	-0036.9	035.5	00.57
060.0	050.0000	0159.7	053.4	136.5	000.0001	-0037.4	036.4	00.29
061.0	050.0000	0159.6	053.4	136.8	000.0001	-0037.8	037.3	00.02
062.0	050.0000	0159.6	053.4	137.2	000.0001	-0038.2	038.2	-00.25
063.0	050.0000	0159.7	053.4	137.5	000.0001	-0038.4	039.1	-00.51
064.0	050.0000	0159.9	053.5	137.9	000.0001	-0038.5	040.0	-00.77
065.0	050.0000	0159.9	053.5	138.2	000.0001	-0038.6	040.9	-00.99
066.0	050.0000	0159.5	053.4	138.7	000.0001	-0038.4	041.8	-01.19
067.0	050.0000	0158.5	053.3	139.2	000.0001	-0038.0	042.7	-01.37
068.0	050.0000	0157.5	053.2	139.8	000.0001	-0037.5	043.5	-01.55
069.0	050.0000	0156.6	053.0	140.3	000.0001	-0037.2	044.4	-01.74
070.0	050.0000	0155.9	053.0	140.8	000.0001	-0037.2	045.2	-01.94
071.0	050.0000	0155.6	052.9	141.2	000.0001	-0037.5	046.1	-02.12
072.0	050.0000	0155.2	052.9	141.7	000.0001	-0038.3	046.9	-02.28
073.0	050.0000	0155.1	052.9	142.1	000.0001	-0039.6	047.8	-02.44
074.0	050.0000	0155.0	052.8	142.5	000.0001	-0041.1	048.6	-02.61
075.0	050.0000	0154.9	052.8	142.9	000.0001	-0042.9	049.5	-02.77
076.0	050.0000	0154.5	052.8	143.4	000.0001	-0045.0	050.3	-02.91
077.0	050.0000	0154.0	052.7	143.9	000.0001	-0047.3	051.1	-03.05
078.0	050.0000	0153.5	052.7	144.3	000.0001	-0049.5	051.9	-03.20
079.0	050.0000	0152.8	052.6	144.8	000.0001	-0051.7	052.7	-03.35
080.0	050.0000	0152.1	052.5	145.3	000.0001	-0053.7	053.5	-03.48
081.0	050.0000	0151.3	052.4	145.8	000.0001	-0055.6	054.3	-03.60

Protected Buildings Map:

This satellite map shows the closest distances to relevant buildings around the proposed W209CJ transmission site. At the proposed overall power of 4 watts and the antenna height of 13.1 meters above ground, the marked building locations, combined with the CA2-FM CP antenna pattern, are beyond (or below) the calculated minimum distances of interfering U. to D. field values for 3rd adjacent protection to WQXQ, Ossining, NY. (See the attached individual analysis of each pertinent radial.) Along all pertinent azimuths, the interference signal remains above the buildings.)



There are no tall buildings within this distance, as is shown on the map. Therefore, no 'interference' will be caused to WQXQ by the proposed facility.

W209CJ Mt Kisko, NY, Showing Protection to WQXW, Channel: 212
Geographic Coordinates: N. 411337.3 W. 734257.4
74.1204(d) Study - Using GLOBE 30 SEC Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.004 kW, Channel: 209
Translator or LPFM Antenna Height AG = 13.1 meters
W209CJ Antenna Model = CA2-FM/CP

Protected Station's Contour = 65.53672 dBu
Translator's or LPFM's full Interference contour 105.53672

Review Azimuth = 51.86 Degrees True
Horizontal Relative Field at Review Azimuth = 0.041
Translator/LPFM ERP on the horizontal at Review Azimuth = 0.0 kW
Distance between stations = 10.2 km
Protected Station= WQXW, .25 kW, 244 M meters COR AMSL

Distance to building on 51.86 deg = 33.64

Depression Angle From Degree(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	0.04	0.0002	015.0171	015.0171	013.100
05.00	0.982	0.04	0.0002	014.7513	014.6952	011.814
10.00	0.952	0.04	0.0001	014.3008	014.0835	010.617
15.00	0.915	0.04	0.0001	013.7361	013.2681	009.545
20.00	0.866	0.04	0.0001	013.0048	012.2205	008.652
25.00	0.796	0.04	0.0001	011.9536	010.8336	008.048
30.00	0.718	0.04	0.0001	010.7868	009.3416	007.707
35.00	0.628	0.04	0.0001	009.4352	007.7289	007.688
40.00	0.528	0.04	0.0000	007.9335	006.0774	008.000
45.00	0.423	0.04	0.0000	006.3567	004.4949	008.605
50.00	0.329	0.04	0.0000	004.9451	003.1787	009.312
55.00	0.247	0.04	0.0000	003.7047	002.1249	010.065
60.00	0.19	0.04	0.0000	002.8532	001.4266	010.629
65.00	0.142	0.04	0.0000	002.1279	000.8993	011.171
70.00	0.134	0.04	0.0000	002.0123	000.6882	011.209
75.00	0.135	0.04	0.0000	002.0273	000.5247	011.142
80.00	0.142	0.04	0.0000	002.1279	000.3695	011.004
85.00	0.15	0.04	0.0000	002.2526	000.1963	010.856
90.00	0.157	0.04	0.0000	002.3622	000.0000	010.738

W209CJ Mt Kisko, NY, Showing Protection to WQXW, Channel: 212
Geographic Coordinates: N. 411337.3 W. 734257.4
74.1204(d) Study - Using GLOBE 30 SEC Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.004 kW, Channel: 209
Translator or LPFM Antenna Height AG = 13.1 meters
W209CJ Antenna Model = CA2-FM/CP

Protected Station's Contour = 65.53672 dBu
Translator's or LPFM's full Interference contour 105.53672

Review Azimuth = 138 Degrees True
Horizontal Relative Field at Review Azimuth = 0.234
Translator/LPFM ERP on the horizontal at Review Azimuth = 0.0 kW
Distance between stations = 10.2 km
Protected Station= WQXW, .25 kW, 244 M meters COR AMSL

Distance to building at 138 deg. = 44.1 meters

Depression Angle From Degree(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	0.23	0.0009	035.8758	035.8758	013.100
05.00	0.982	0.23	0.0009	035.2408	035.1067	010.029
10.00	0.952	0.23	0.0008	034.1646	033.6455	007.167
15.00	0.915	0.23	0.0008	032.8156	031.6975	004.607
20.00	0.866	0.23	0.0007	031.0685	029.1948	002.474
25.00	0.796	0.23	0.0006	028.5572	025.8816	001.031*
30.00	0.718	0.23	0.0005	025.7696	022.3171	000.215*
35.00	0.628	0.23	0.0004	022.5408	018.4643	000.171*
40.00	0.528	0.23	0.0003	018.9532	014.5190	000.917*
45.00	0.423	0.23	0.0002	015.1862	010.7383	002.362
50.00	0.329	0.23	0.0001	011.8139	007.5938	004.050
55.00	0.247	0.23	0.0001	008.8506	005.0765	005.850
60.00	0.19	0.23	0.0000	006.8164	003.4082	007.197
65.00	0.142	0.23	0.0000	005.0836	002.1484	008.493
70.00	0.134	0.23	0.0000	004.8074	001.6442	008.583
75.00	0.135	0.23	0.0000	004.8432	001.2535	008.422
80.00	0.142	0.23	0.0000	005.0836	000.8828	008.094
85.00	0.15	0.23	0.0000	005.3814	000.4690	007.739
90.00	0.157	0.23	0.0000	005.6433	000.0000	007.457

* Over Parking lot

W209CJ Mt Kisko, NY, Showing Protection to WQXW, Channel: 212
Geographic Coordinates: N. 411337.3 W. 734257.4
74.1204(d) Study - Using GLOBE 30 SEC Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.004 kW, Channel: 209
Translator or LPFM Antenna Height AG = 13.1 meters
W209CJ Antenna Model = CA2-FM/CP
Protected Station's Contour = 65.53672 dBu
Translator's or LPFM's full Interference contour 105.53672

Review Azimuth = 152.1 Degrees True
Horizontal Relative Field at Review Azimuth = 0.178
Translator/LPFM ERP on the horizontal at Review Azimuth = 0.0 kW
Distance between stations = 10.2 km
Protected Station= WQXW, .25 kW, 244 M meters COR AMSL

Distance to building at 152.1 Deg.= 20.7 meters

Depression Angle From Degree(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	0.18	0.0007	031.2899	031.2899	013.100
05.00	0.982	0.18	0.0007	030.7361	030.6191	010.421
10.00	0.952	0.18	0.0006	029.7974	029.3447	007.926
15.00	0.915	0.18	0.0006	028.6209	027.6456	005.692
20.00	0.866	0.18	0.0005	027.0970	025.4629	003.832
25.00	0.796	0.18	0.0005	024.9068	022.5732	002.574
30.00	0.718	0.18	0.0004	022.4755	019.4644	001.862 *
35.00	0.628	0.18	0.0003	019.6594	016.1041	001.824 *
40.00	0.528	0.18	0.0002	016.5304	012.6631	002.474
45.00	0.423	0.18	0.0001	013.2450	009.3656	003.734
50.00	0.329	0.18	0.0001	010.3038	006.6231	005.207
55.00	0.247	0.18	0.0000	007.7192	004.4276	006.777
60.00	0.19	0.18	0.0000	005.9451	002.9725	007.951
65.00	0.142	0.18	0.0000	004.4338	001.8738	009.082
70.00	0.134	0.18	0.0000	004.1928	001.4340	009.160
75.00	0.135	0.18	0.0000	004.2241	001.0933	009.020
80.00	0.142	0.18	0.0000	004.4338	000.7699	008.734
85.00	0.15	0.18	0.0000	004.6935	000.4091	008.424
90.00	0.157	0.18	0.0000	004.9219	000.0000	008.178

* Over parking lot

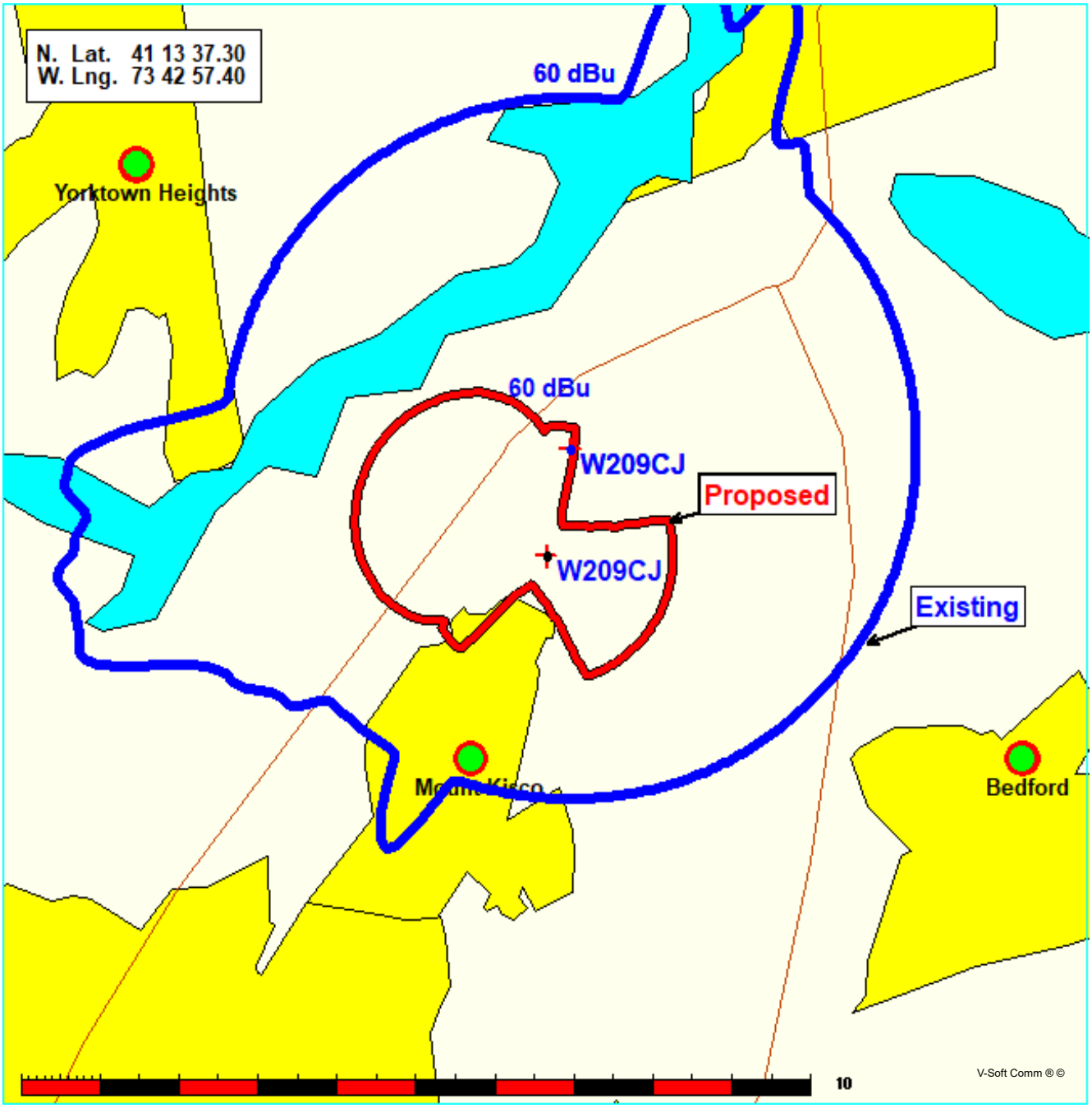
W209CJ Mt Kisko, NY, Showing Protection to WQXW, Channel: 212
Geographic Coordinates: N. 411337.3 W. 734257.4
74.1204(d) Study - Using GLOBE 30 SEC Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.004 kW, Channel: 209
Translator or LPFM Antenna Height AG = 13.1 meters
W209CJ Antenna Model = CA2-FM/CP

Protected Station's Contour = 65.53672 dBu
Translator's or LPFM's full Interference contour 105.53672

Review Azimuth = 199.5 Degrees True
Horizontal Relative Field at Review Azimuth = 0.032
Translator/LPFM ERP on the horizontal at Review Azimuth = 0.0 kW
Distance between stations = 10.2 km
Protected Station= WQXW, .25 kW, 244 M meters COR AMSL

Distance to building on 199.5 deg. = 9.3 meters

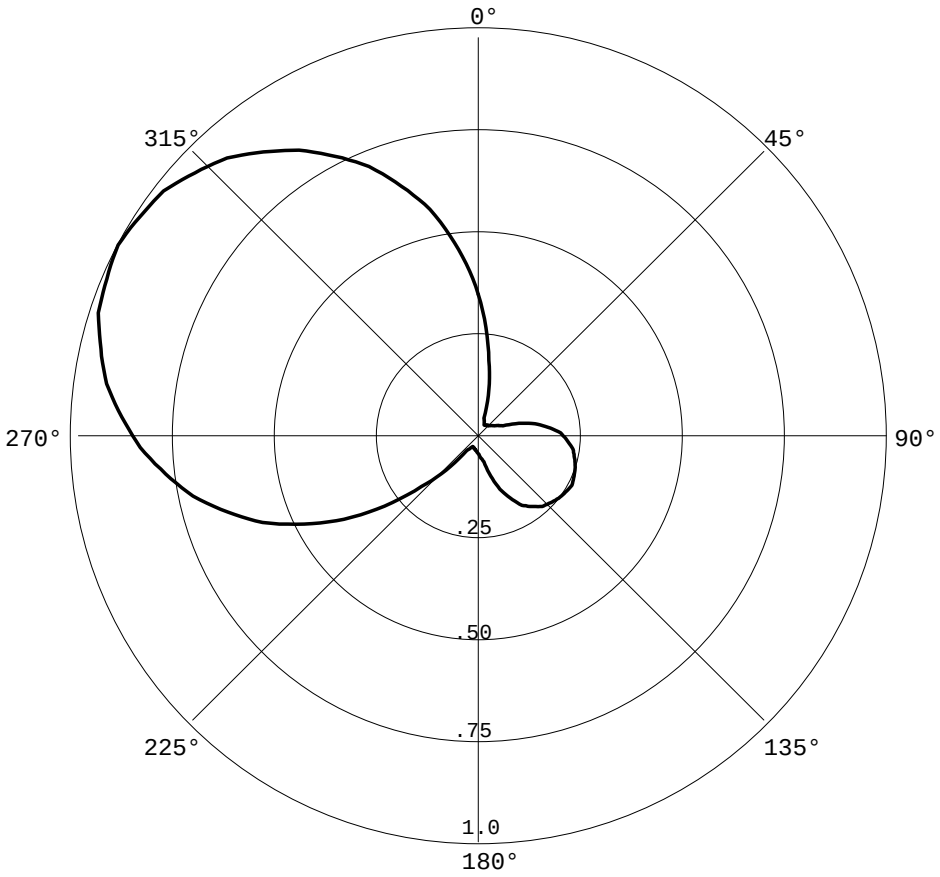
Depression Angle From Degree(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	0.03	0.0001	013.2669	013.2669	013.100
05.00	0.982	0.03	0.0001	013.0321	012.9825	011.964
10.00	0.952	0.03	0.0001	012.6341	012.4421	010.906
15.00	0.915	0.03	0.0001	012.1352	011.7217	009.959
20.00	0.866	0.03	0.0001	011.4891	010.7962	009.170
25.00	0.796	0.03	0.0001	010.5604	009.5710	008.637
30.00	0.718	0.03	0.0001	009.5296	008.2529	008.335
35.00	0.628	0.03	0.0001	008.3356	006.8281	008.319
40.00	0.528	0.03	0.0000	007.0089	005.3691	008.595
45.00	0.423	0.03	0.0000	005.6159	003.9710	009.129
50.00	0.329	0.03	0.0000	004.3688	002.8082	009.753
55.00	0.247	0.03	0.0000	003.2729	001.8773	010.419
60.00	0.19	0.03	0.0000	002.5207	001.2604	010.917
65.00	0.142	0.03	0.0000	001.8799	000.7945	011.396
70.00	0.134	0.03	0.0000	001.7778	000.6080	011.429
75.00	0.135	0.03	0.0000	001.7910	000.4636	011.370
80.00	0.142	0.03	0.0000	001.8799	000.3264	011.249
85.00	0.15	0.03	0.0000	001.9900	000.1734	011.118
90.00	0.157	0.03	0.0000	002.0869	000.0000	011.013


N. Lat. 41 13 37.30
W. Lng. 73 42 57.40
60 dBu
Yorktown Heights
60 dBu
W209CJ
Proposed
W209CJ
Existing
Bedford
10
V-Soft Comm ® ©

W209CJ 06-22-2020 RMS(V)= .484

Azi	Field	dBk	kW
000	0.348	-33.148	0.000
010	0.159	-39.951	0.000
020	0.042	-51.514	0.000
030	0.030	-54.437	0.000
040	0.033	-53.609	0.000
050	0.039	-52.158	0.000
060	0.050	-50.000	0.000
070	0.080	-45.918	0.000
080	0.154	-40.229	0.000
090	0.208	-37.618	0.000
100	0.237	-36.484	0.000
110	0.252	-35.951	0.000
120	0.258	-35.747	0.000
130	0.247	-36.125	0.000
140	0.228	-36.821	0.000
150	0.190	-38.404	0.000
160	0.127	-41.903	0.000
170	0.061	-48.273	0.000
180	0.044	-51.110	0.000
190	0.036	-52.853	0.000
200	0.032	-53.876	0.000
210	0.033	-53.609	0.000
220	0.073	-46.713	0.000
230	0.227	-36.859	0.000
240	0.424	-31.432	0.001
250	0.599	-28.431	0.001
260	0.738	-26.618	0.002
270	0.847	-25.422	0.003
280	0.932	-24.591	0.003
290	0.983	-24.128	0.004
300	0.996	-24.014	0.004
310	0.967	-24.271	0.004
320	0.902	-24.875	0.003
330	0.806	-25.853	0.003
340	0.686	-27.253	0.002
350	0.534	-29.429	0.001

Graph is Relative Field



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.