Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 54dBu contour of second adjacent channel station WMRQ-FM, channel 281B, Waterbury, CT. 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 W279CI.P:	250 watts
The proposed COR for W279CI.P:	70 meters
WMRQ-FM F(50/50) contour at proposed site:	55.1dBu
The F(50/10) contour of proposed W279CI.P:	95.1dBu

The predicted maximum distance to the 95.1dbu interfering contour is 1690 meters as seen in Exhibit 13-A1. Exhibit 13-A2 demonstrates the distances to the interfering contour by taking into account the vertical elevation pattern of the Shively 6812 five bay antenna. It has been determined that the interfering contour of 95.1dbu does not extend to any regularly occupied structures.

As seen in attachment 13-A3, contour distances in .1km increments have been overlaid on Google Earth to a distance of 1700 meters along with the 95.1dbu interfering contour based on the directional antenna array.

Each .1km area has been examined for the highest site elevation within that distance and compared to the height above or below ground for the interfering contour distance. Taking into account the effective radiated power in that direction along with the vertical elevation pattern of the proposed antenna supports the statement that no regularly occupied structures are in the interference areas. The specific areas of study are labeled Area #1 through Area #6 on Exhibit 13-A3 along with the following study results:

The interference elevations above or below ground are based on flat terrain from the base of the tower which in this case is 225.5m. In all areas within the interfering contour, the ground elevations are below the flat terrain basis. These differences in elevation are noted in the study notes that follow:

Area #1: 110m at 190 degrees. ERP = 30w. IX above ground level at 110m = 7.2m
Site elevation drop: 9m

Area #2: 420m at 290 degrees. ERP = 77w. No IX hits the ground at this distance.
Site elevation drop: 42m

Area #3: 687m at 260 degrees. ERP = 71w No IX hits the ground at this distance.
Site elevation drop: 59m.

Area #4: 1400-1700m at 260 to 280 degrees. ERP ranges from 71-95 watts. At this power level the IX distance is less than the distance to this area by at least 200m.

Area #5: 750m at 320 degrees. ERP = 61w. IX above ground level at 750m = 2.89m
Site elevation drop: 49m

Area #6: 1619m at 145 degrees. ERP = 194w. A lobe lands at 1361m, 1619m is clear.
Site elevation drop: 54m

Area #7: 1500m at 150 degrees. ERP = 194w. A lobe lands at 1381m, 1500m is clear.
Site elevation drop: 56m

All other areas within the interfering contour are well below the elevations listed in Exhibits 13-A2 for their corresponding power levels.

As can be seen in Exhibit 13–A3, there are no regularly occupied structures at the base of the tower and no interference will occur to any regularly occupied structures within the interfering contour.

Therefore a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference is respectfully requested.

Distance to Interfering Contour

Distance to Contour Report

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 10.0 %
# of Radials Calculated: 72
FCC Matching HAAT Calculation Used
Field Strength: 95.10 dBuV/m

Primary Terrain: V-Soft 30 Second US Database
Secondary Terrain: V-Soft 3 Second US Terrain

Transmitter Information:

Call Letters: W297AN
File Number: BLFT20140922ACK
Latitude: 41-22-27 N
Longitude: 073-26-47 W
ERP: 0.25 kW
Channel: 279
Frequency: 103.7 MHz
AMSL Height: 296.0 m
Elevation: 226.0 m
Horiz. Antenna Pattern: Directional
Vert. Elevation Pattern: No

Azimuth (deg)	Distance (km)	HAAT (m)
0.0	1.61	147.9
10.0	1.64	164.5
20.0	1.69	186.0
30.0	1.66	170.4
40.0	1.65	165.7
50.0	1.66	172.4
60.0	1.63	157.5
70.0	1.61	147.1
80.0	1.61	149.8
90.0	1.61	140.0
100.0	1.61	116.6
110.0	1.61	111.4
120.0	1.61	113.0
130.0	1.61	124.7
140.0	1.61	129.9
150.0	1.61	164.0
160.0	1.49	147.0
170.0	0.98	139.5

180.0	0.75	142.9
190.0	0.67	111.3
200.0	0.67	103.4
210.0	0.71	103.1
220.0	0.80	94.7
230.0	0.84	88.8
240.0	0.91	101.3
250.0	0.96	123.2
260.0	1.04	124.2
270.0	1.10	128.2
280.0	1.20	139.3
290.0	1.08	131.4
300.0	1.20	111.2
310.0	0.97	90.0
320.0	0.96	88.3
330.0	0.85	81.5
340.0	0.85	88.0
350.0	1.47	110.0

Average HAAT for radials shown: 128.0 m

EXHIBIT 13 - A2
74.1204(d) Showing
W279CI
Danbury, CT

ERP (kw): 0.25
Height of Antenna above Ground (m): 70
Translator's IX Contour: 95.1
Antenna Type: 5 bay fullwave Shively 6812

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.2500	1949.7099	70.000
5	0.793	0.1572	1546.1200	-64.753
10	0.323	0.0261	629.7563	-39.356
15	0.094	0.0022	183.2727	22.566
20	0.236	0.0139	460.1315	-87.374
25	0.120	0.0036	233.9652	-28.878
30	0.068	0.0012	132.5803	3.710
35	0.162	0.0066	315.8530	-111.166
40	0.117	0.0034	228.1161	-76.630
45	0.002	0.0000	3.8994	67.243
50	0.106	0.0028	206.6693	-88.318
55	0.144	0.0052	280.7582	-159.984
60	0.118	0.0035	230.0658	-129.243
65	0.060	0.0009	116.9826	-36.022
70	0.003	0.0000	5.8491	64.504
75	0.033	0.0003	64.3404	7.852
80	0.042	0.0004	81.8878	-10.644
85	0.028	0.0002	54.5919	15.616
90	0.001	0.0000	1.9497	68.050

EXHIBIT 13 - A2
74.1204(d) Showing
W279CI
Danbury, CT
Area #1

ERP (kw): 0.03
Height of Antenna above Ground (m): 70
Translator's IX Contour: 95.1
Antenna Type: 5 bay fullwave Shively 6812

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.0300	675.3993	70.000
5	0.793	0.0189	535.5917	23.320
10	0.323	0.0031	218.1540	32.118
15	0.094	0.0003	63.4875	53.568
20	0.236	0.0017	159.3942	15.484
25	0.120	0.0004	81.0479	35.748
30	0.068	0.0001	45.9272	47.036
35	0.162	0.0008	109.4147	7.242
40	0.117	0.0004	79.0217	19.206
45	0.002	0.0000	1.3508	69.045
50	0.106	0.0003	71.5923	15.157
55	0.144	0.0006	97.2575	-9.669
60	0.118	0.0004	79.6971	0.980
65	0.060	0.0001	40.5240	33.273
70	0.003	0.0000	2.0262	68.096
75	0.033	0.0000	22.2882	48.471
80	0.042	0.0001	28.3668	42.064
85	0.028	0.0000	18.9112	51.161
90	0.001	0.0000	0.6754	69.325

EXHIBIT 13 - A2
74.1204(d) Showing
W279CI
Danbury, CT
Area #2

ERP (kw): 0.077
Height of Antenna above Ground (m): 70
Translator's IX Contour: 95.1
Antenna Type: 5 bay fullwave Shively 6812

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.0770	1082.0451	70.000
5	0.793	0.0484	858.0618	-4.785
10	0.323	0.0080	349.5006	9.310
15	0.094	0.0007	101.7122	43.675
20	0.236	0.0043	255.3626	-17.339
25	0.120	0.0011	129.8454	15.125
30	0.068	0.0004	73.5791	33.210
35	0.162	0.0020	175.2913	-30.543
40	0.117	0.0011	126.5993	-11.376
45	0.002	0.0000	2.1641	68.470
50	0.106	0.0009	114.6968	-17.863
55	0.144	0.0016	155.8145	-57.636
60	0.118	0.0011	127.6813	-40.575
65	0.060	0.0003	64.9227	11.160
70	0.003	0.0000	3.2461	66.950
75	0.033	0.0001	35.7075	35.509
80	0.042	0.0001	45.4459	25.245
85	0.028	0.0001	30.2973	39.818
90	0.001	0.0000	1.0820	68.918

EXHIBIT 13 - A2
74.1204(d) Showing
W279CI
Danbury, CT
Area #3

ERP (kw): 0.071
Height of Antenna above Ground (m): 70
Translator's IX Contour: 95.1
Antenna Type: 5 bay fullwave Shively 6812

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.0710	1039.0326	70.000
5	0.793	0.0446	823.9529	-1.812
10	0.323	0.0074	335.6075	11.722
15	0.094	0.0006	97.6691	44.721
20	0.236	0.0040	245.2117	-13.867
25	0.120	0.0010	124.6839	17.306
30	0.068	0.0003	70.6542	34.673
35	0.162	0.0019	168.3233	-26.546
40	0.117	0.0010	121.5668	-8.142
45	0.002	0.0000	2.0781	68.531
50	0.106	0.0008	110.1375	-14.370
55	0.144	0.0015	149.6207	-52.562
60	0.118	0.0010	122.6058	-36.180
65	0.060	0.0003	62.3420	13.499
70	0.003	0.0000	3.1171	67.071
75	0.033	0.0001	34.2881	36.880
80	0.042	0.0001	43.6394	27.024
85	0.028	0.0001	29.0929	41.018
90	0.001	0.0000	1.0390	68.961

EXHIBIT 13 - A2
74.1204(d) Showing
W279CI
Danbury, CT
Area #4

ERP (kw): 0.095
Height of Antenna above Ground (m): 70
Translator's IX Contour: 95.1
Antenna Type: 5 bay fullwave Shively 6812

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.0950	1201.8819	70.000
5	0.793	0.0597	953.0924	-13.067
10	0.323	0.0099	388.2079	2.588
15	0.094	0.0008	112.9769	40.759
20	0.236	0.0053	283.6441	-27.012
25	0.120	0.0014	144.2258	9.048
30	0.068	0.0004	81.7280	29.136
35	0.162	0.0025	194.7049	-41.678
40	0.117	0.0013	140.6202	-20.389
45	0.002	0.0000	2.4038	68.300
50	0.106	0.0011	127.3995	-27.594
55	0.144	0.0020	173.0710	-71.771
60	0.118	0.0013	141.8221	-52.822
65	0.060	0.0003	72.1129	4.644
70	0.003	0.0000	3.6056	66.612
75	0.033	0.0001	39.6621	31.689
80	0.042	0.0002	50.4790	20.288
85	0.028	0.0001	33.6527	36.475
90	0.001	0.0000	1.2019	68.798

EXHIBIT 13 - A2
74.1204(d) Showing
W279CI
Danbury, CT
Area #5

ERP (kw): 0.061
Height of Antenna above Ground (m): 70
Translator's IX Contour: 95.1
Antenna Type: 5 bay fullwave Shively 6812

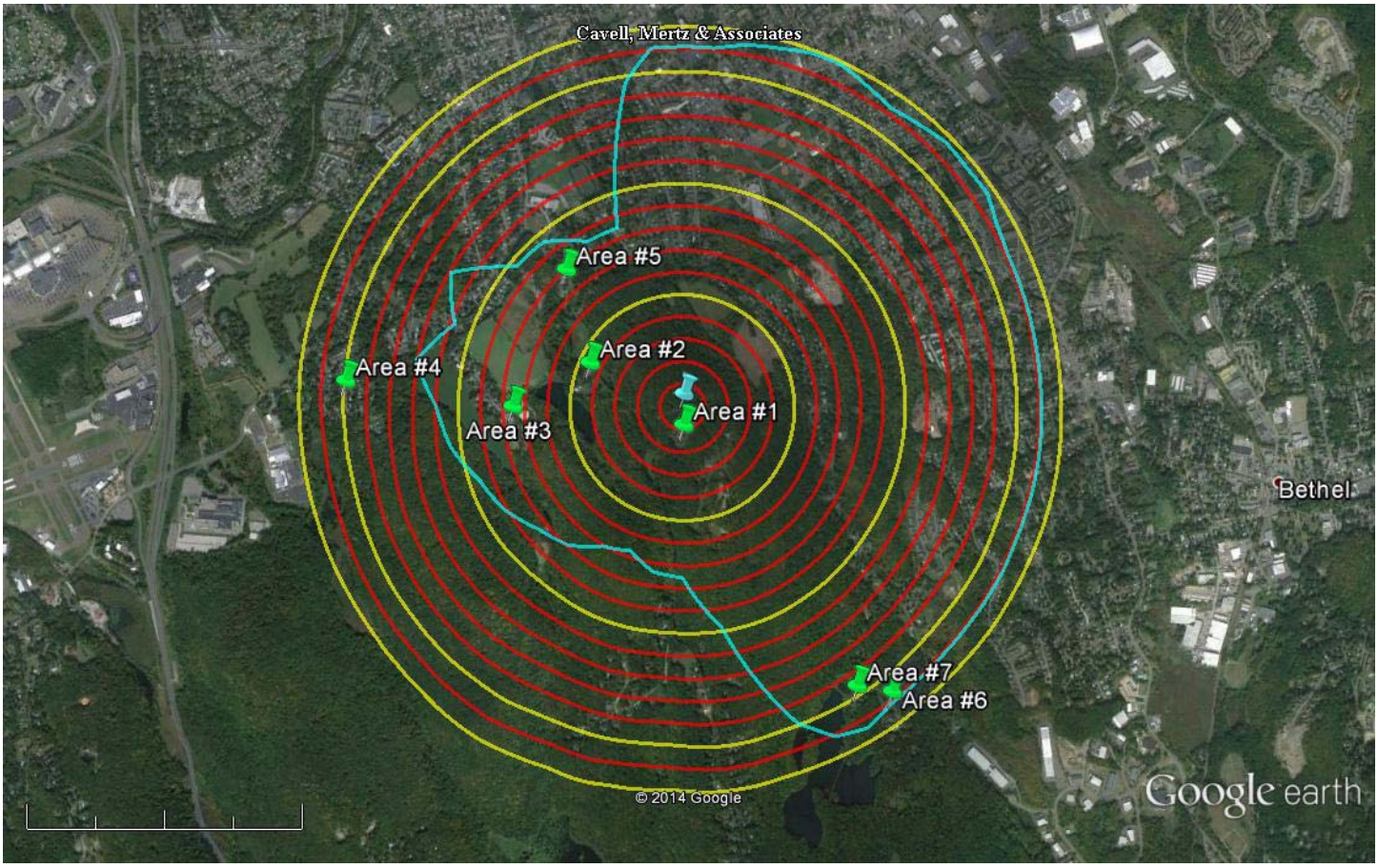
Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.0610	963.0857	70.000
5	0.793	0.0384	763.7269	3.437
10	0.323	0.0064	311.0767	15.982
15	0.094	0.0005	90.5301	46.569
20	0.236	0.0034	227.2882	-7.737
25	0.120	0.0009	115.5703	21.158
30	0.068	0.0003	65.4898	37.255
35	0.162	0.0016	156.0199	-19.489
40	0.117	0.0008	112.6810	-2.430
45	0.002	0.0000	1.9262	68.638
50	0.106	0.0007	102.0871	-8.203
55	0.144	0.0013	138.6843	-43.604
60	0.118	0.0008	113.6441	-28.419
65	0.060	0.0002	57.7851	17.629
70	0.003	0.0000	2.8893	67.285
75	0.033	0.0001	31.7818	39.301
80	0.042	0.0001	40.4496	30.165
85	0.028	0.0000	26.9664	43.136
90	0.001	0.0000	0.9631	69.037

EXHIBIT 13 - A2
74.1204(d) Showing
W279CI
Danbury, CT
Area #6 and Area #7

ERP (kw): 0.194
Height of Antenna above Ground (m): 70
Translator's IX Contour: 95.1
Antenna Type: 5 bay fullwave Shively 6812

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.1940	1717.5163	70.000
5	0.793	0.1220	1361.9904	-48.705
10	0.323	0.0202	554.7578	-26.333
15	0.094	0.0017	161.4465	28.215
20	0.236	0.0108	405.3338	-68.632
25	0.120	0.0028	206.1020	-17.102
30	0.068	0.0009	116.7911	11.604
35	0.162	0.0051	278.2376	-89.591
40	0.117	0.0027	200.9494	-59.168
45	0.002	0.0000	3.4350	67.571
50	0.106	0.0022	182.0567	-69.464
55	0.144	0.0040	247.3223	-132.595
60	0.118	0.0027	202.6669	-105.515
65	0.060	0.0007	103.0510	-23.396
70	0.003	0.0000	5.1525	65.158
75	0.033	0.0002	56.6780	15.253
80	0.042	0.0003	72.1357	-1.040
85	0.028	0.0002	48.0905	22.093
90	0.001	0.0000	1.7175	68.282

Exhibit 13-A3



Google earth

miles 1
km 3

Blue Pin Marker, NAD 27
41 22' 27" N
73 26' 47" W
Red and Yellow Uniform Circle Contours are spaced at .1km increments.
Area #1 through Area #7 are specific study areas due to their site elevations.

Blue Contour - Proposed W279CI 95.1dbu(F50-10)