



Application for Minor Change
Translator Station W276DV Miami FL
FCC Facility ID 202997

TECHNICAL EXHIBITS

This technical exhibit is prepared on behalf of Fenix Broadcasting Corporation, Permittee of Translator Station W276DX Miami FL. This instant application requests a minor change of the translator to a new location, with no change in Effective Radiated Power or operating Channel. The authorized directional antenna is modified to meet contour protection in the allocation landscape. The proposed translator will repeat primary AM station WWFE (AM) as currently authorized, and the proposed 60dBu (50,50) contour is well within the 25-mile distance from the WWFE (AM) tower array.

The attached Map of Contours depicts the proposed allocation situation with respect to all pertinent co and adjacent facilities. All facilities have been depicted utilizing either the maximum ERP or directional pattern data as on file with the commission and 1 degree radial intervals on close in contours in the interest of accuracy. AAT data for the proposed facility was derived from the FCC's 30 second database, *Comstudy*.

As seen on the attached a U/d ratio of +40 dB at the proposed location with the following notes:

- In compliance with 47 CFR 74.1204(g) the proposed facility operates at an effective radiated power which is not over 100 watts, therefore protection to intermediate frequency facilities has not been calculated and meets all mileage separation requirements.
- The proposed location is within the protected 60dbu (50,50) contour of second-adjacent stations WMXJ channel 274-C0 and WMIB channel 278-C located 23.1km away and combined into the same antenna. Therefore, an interference analysis has been conducted on both stations based on the u/d ratio of +40 db at the proposed site. The signal of both stations at the proposed location is 86.4 dbu (50,50) making the relevant interfering contour of the proposed facility 126.4 dbu (50,10). The free space distance to this contour in a worse-case scenario utilizing a single dipole antenna is 33.4 meters.

- The proposed 2-bay half wave spaced antenna is to be pole mounted on the mechanical room on the roof of a building. The total height is height is 29.3 meters above ground, which meets all FAA glide-slope restrictions for the location. The pole extends 9.1 meters above the roof of the building, which is access restricted to the general public. At the request of the FAA, notification has been made of the proposed translator operation for coordination of the frequency for potential interference to air traffic communications.

- The Attached chart demonstrates that the proposed antenna vertical radiation will not extend below the roof of the building at any depression angle. The vertical field values were provided by the manufacturer, and the calculations show that the interfering contour is incapable of reaching the general public.

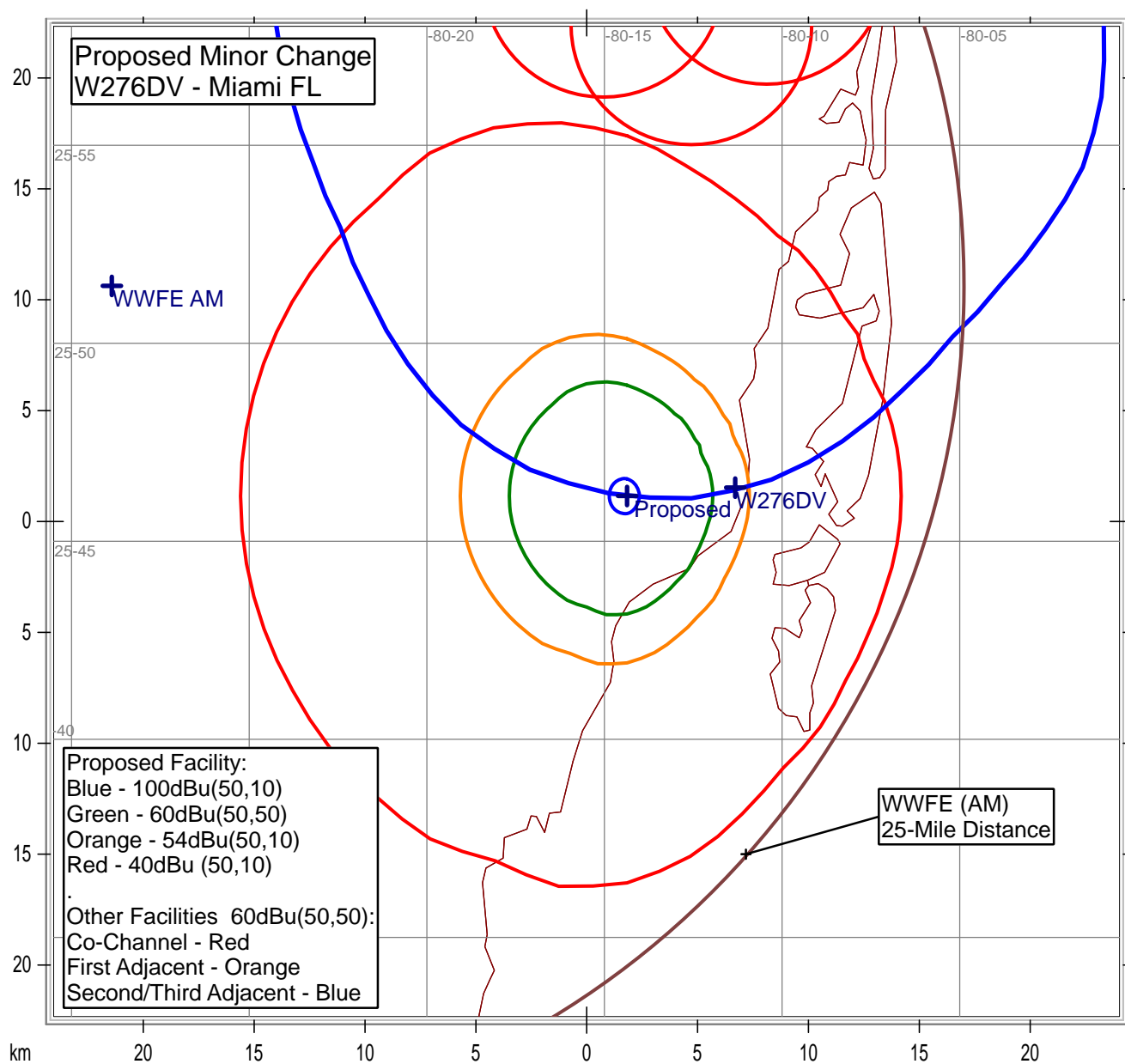
- Based on this showing, a waiver of Section 74.1204 is requested in accordance with *Living Way Ministries, Inc.* (FCC 08-242) on the basis of zero population in the area of interference.

It should be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. 74.1203.

Respectfully,

A handwritten signature in black ink, reading "Jim Turvaille". The signature is stylized with a large, looping "J" and a cursive "Turvaille".

Jim Turvaille, Owner
Turbo Tech Services
Certified Radio Engineer – Consultant



State Borders Lat/Lon Grid

NICOM BKG77 / 2
2-bay Half Wave Spaced Circularly Polarized FM Antennaa



Frequency = 103.1 Mhz
Interfering Contour 126.4 dBu (50,10)

ERP= 99 watts
Height = 9 m AGL

Depression Angle	Relative Field (o)	Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
1	1.000	99.0	33.41	515.69	654
2	0.998	98.6	33.34	257.88	310
3	0.996	98.2	33.27	171.97	196
4	0.993	97.6	33.17	129.02	139
5	0.990	97.0	33.07	103.26	105
6	0.985	96.1	32.90	86.10	82
7	0.980	95.1	32.74	73.85	66
8	0.974	93.9	32.54	64.67	54
9	0.967	92.6	32.30	57.53	44
10	0.959	91.0	32.04	51.83	37
11	0.951	89.5	31.77	47.17	31
12	0.942	87.8	31.47	43.29	26
13	0.932	86.0	31.13	40.01	22
14	0.921	84.0	30.77	37.20	19
15	0.910	82.0	30.40	34.77	16
16	0.899	80.0	30.03	32.65	13
17	0.886	77.7	29.60	30.78	11
18	0.873	75.5	29.16	29.12	10
19	0.860	73.2	28.73	27.64	8
20	0.846	70.9	28.26	26.31	7
21	0.832	68.5	27.79	25.11	6
22	0.817	66.1	27.29	24.03	5
23	0.801	63.5	26.76	23.03	4
24	0.786	61.2	26.26	22.13	3
25	0.770	58.7	25.72	21.30	3
26	0.753	56.1	25.15	20.53	2
27	0.736	53.6	24.59	19.82	2
28	0.720	51.3	24.05	19.17	2
29	0.702	48.8	23.45	18.56	1
30	0.685	46.5	22.88	18.00	1
31	0.667	44.0	22.28	17.47	1
32	0.650	41.8	21.71	16.98	1
33	0.632	39.5	21.11	16.52	1
34	0.614	37.3	20.51	16.09	1
35	0.596	35.2	19.91	15.69	1
36	0.578	33.1	19.31	15.31	1
37	0.561	31.2	18.74	14.95	1
38	0.543	29.2	18.14	14.62	1
39	0.525	27.3	17.54	14.30	2
40	0.508	25.5	16.97	14.00	2
41	0.490	23.8	16.37	13.72	2
42	0.473	22.1	15.80	13.45	2
43	0.456	20.6	15.23	13.20	2
44	0.439	19.1	14.67	12.96	3
45	0.422	17.6	14.10	12.73	3

Depression Angle	Relative Field	Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
46	0.405	16.2	13.53	16.68	3
47	0.389	15.0	12.99	16.40	3
48	0.373	13.8	12.46	16.14	4
49	0.358	12.7	11.96	15.90	4
50	0.352	12.3	11.76	15.66	4
51	0.327	10.6	10.92	15.44	5
52	0.313	9.7	10.46	15.22	5
53	0.298	8.8	9.95	15.02	5
54	0.284	8.0	9.49	14.83	5
55	0.271	7.3	9.05	14.65	6
56	0.258	6.6	8.62	14.47	6
57	0.245	5.9	8.18	14.30	6
58	0.232	5.3	7.75	14.15	6
59	0.220	4.8	7.35	14.00	7
60	0.208	4.3	6.95	13.85	7
61	0.197	3.8	6.58	13.72	7
62	0.186	3.4	6.21	13.59	7
63	0.179	3.2	5.98	13.46	7
64	0.165	2.7	5.51	13.35	8
65	0.156	2.4	5.21	13.24	8
66	0.146	2.1	4.88	13.13	8
67	0.137	1.9	4.58	13.03	8
68	0.128	1.6	4.28	12.94	9
69	0.120	1.4	4.01	12.85	9
70	0.112	1.2	3.74	12.77	9
71	0.104	1.1	3.47	12.69	9
72	0.097	0.9	3.24	12.61	9
73	0.090	0.8	3.01	12.55	10
74	0.083	0.7	2.77	12.48	10
75	0.077	0.6	2.57	12.42	10
76	0.064	0.4	2.14	12.36	10
77	0.059	0.3	1.97	12.31	10
78	0.053	0.3	1.77	12.27	10
79	0.048	0.2	1.60	12.22	11
80	0.043	0.2	1.44	12.18	11
81	0.043	0.2	1.44	12.15	11
82	0.038	0.1	1.27	12.11	11
83	0.033	0.1	1.10	12.09	11
84	0.028	0.1	0.94	12.06	11
85	0.023	0.1	0.77	12.04	11
86	0.019	0.0	0.63	12.03	11
87	0.014	0.0	0.47	12.01	12
88	0.009	0.0	0.30	12.00	12
89	0.005	0.0	0.17	12.00	12
90	0.000	0.0	0.00	12.00	12

NOTES:

- HEIGHT HAS BEEN REDUCED BY 2 METERS TO ALLOW FOR HUMAN EXPOSURE
- DISTANCE FROM ANTENNA TO GROUND IS ACTUALLY TO A POINT 2 METERS ABOVE GROUND