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ENGINEERING REPORT

Hauppauge, NY, Channel 296D FM Translator Application

ENGINEERING STATEMENT

Juan Alberto Ayala ("Applicant") submits this technical minor amendment for its pending 1983 application for a new FM translator station at Hauppauge, NY. The pending application file number is BNPFT-20030313AAV.

This filing includes a slight coordinate correction and a reduction to the ERP. The proposed changes are minor pursuant to Section 74.1233(a) of the FCC Rules.

LPFM Preclusion Study Results for the herein proposed facility are provided in the separate Exhibit 1 (Section 1, Question 5 of the FCC Form 349, as directed by the FCC).

CHANNEL STUDY

Attached as Figure EE1 is a channel study for the proposed channel 296D facility. All required protections are met by contour non-overlap pursuant to Section 74.1204, with the exception of protection to WLTV(FM), New York, 294B. WLTV is protected, as discussed below.

CONTOUR OVERLAP SHOWING

The service and interference contour distances that are listed on Figure EE1 use the worst-case (greatest) distance along any bearing for each facility, and also considers each protected station as omni-directional. No contour overlap using this worst-case test means no possible contour overlap when applying Section 73.313 methodology.

Figure EE2, attached, shows non-overlap between the service contour of WLIR-FM from the interference contour of the proposed channel 296D facility. All contours were determined pursuant to Section 73.313 of the FCC Rules using a USGS 3 arc-second terrain database at one-degree radial intervals.

PROTECTION TO WLTW

WLTW, New York, NY, 294B, is second adjacent-channel to the proposed channel 296D facility and is located only 64.9 kilometers (at 264 degrees True bearing) from the proposed 296D transmitter site. The 60 dBu F50,50 service contour extends just beyond the proposed 296D transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to WLTW.

Note that a rule waiver of Section 74.1204 for this second/third adjacent-channel protection using the well-established *Living Way Ministries* Methodology is respectfully requested if such a rule waiver is deemed necessary for protection to this station.

The F50,50 signal strength from WLTW at the proposed 296D transmitter site is 54.5 dBu (the “desired” signal). The second/third adjacent-channel protection of Section 74.1204 is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to WLTW from the proposed 296D facility is a signal of greater than or equal to 94.5 dBu.

Figure EE3 is the vertical plane relative field pattern for the proposed antenna. By adjusting for the vertical plane downward relative field values of the proposed antenna, it is herein demonstrated that the 94.5 dBu interfering signal (using a free space field determination) does not exist at any point a ground level. (Actually, the study is made to 2 meters above ground level to account for a person’s height.)

Attached as Figure EE4 is a tabulation of various points (at 2 meters above ground level) from the proposed translator tower base. (Column B is the different distances from the tower base to each studied point.) The actual distance from the antenna to each point is listed in Column C, the hypotenuse of the vertical height (Column A) and the horizontal distance (Column B). Because the calculated distance to the free space interfering signal (Column J) is less than the hypotenuse distance (Column C) for each studied point, the interfering signal does not reach any studied point. (In other words, the interfering signal does not make it to 2 meters above ground level to any point.) Therefore, pursuant to Section 74.1204(d) of the FCC Rules, WLTW is adequately protected by the proposed facility.

The above study results of Figure EE4 assume uniform terrain elevation near the proposed tower. Because the clearance shown (Column C minus Column J values) is at least 25 meters for all rows, this assumption is acceptable for showing non-

interference—no actual elevation within 600 meters of the proposed translator tower is at an elevation that is more than 20 meters above that of the tower base elevation.

SECTION 74.1204 CHANNEL STUDY

PROJECT: HAUPPAUGE, NY, 296D FROM PROPOSED SITE

STUDY COORDINATES: N 40-48-33.0; W 73-13-16.0 (N D-M-S; W D-M-S)

Call Docket	Channel FacilityID	Class Service	Frequency ERP	Status DA?	City HAAT	State RCAMSL	Country RCAGL	File Number
Latitude	Longitude			ASRN	Dist (km)	Dist (mi)	Azimuth	
Licensee/Permittee								

WLTW	294 B	FM	106.7 MHz	LIC	NEW YORK	NY	US	BLH-19940203KA
	-		56571		6. kW	415. m	429. m	413. m
N 40 44 54.00	W 73 59 10.00			-	64.93 km	40.35 mi	264.26°	AMFM

RADIO LICENSES, L.L.C.

NOTE: A SHOWING BASED ON THE LIVING WAY MINISTRIES METHODOLOGY TO THIS STATION IS INCLUDED WITH THIS APPLICATION THAT DEMONSTRATES PROTECTION TO THIS FACILITY.

WXPX	296 A	FM	107.1 MHz	LIC	BRIARCLIFF MANOR	NY	US	BLH-19980521KA
	-		50056		1.9 kW DA	180. m	264. m	148. m
N 41 4 49.00	W 73 48 26.00			1002472	57.81 km	35.92 mi	301.67°	6

JOHNSON ROAD LICENSES, INC.

Protected Contour Dist: 32.6 km Prop 296D Interf Contour Dist: 19.1 km
Result: 6.1 km CLEAR (WORST-CAST STUDY)

NEW	296 D	FX	107.1 MHz	APP	STONY BROOK	NY	US	BNPFT-20030314BGL
	-		143586		0.01 kW	152.7 m	174. m	104. m
N 40 54 17.60	W 73 6 48.60			1023062	13.98 km	8.68 mi	40.34°	STATE

UNIVERSITY OF NEW YORK

NOTE: THIS IS ALSO A PENDING AUCTION 83 FMT APPLICATION AND A NEW MX TO THIS FACILITY IS NOT BEING CAUSED BY THIS AMENDMENT.

NEW	296 D	FX	107.1 MHz	APP	HAUPPAUGE	NY	US	BNPFT-20030313AAV
	-		144203		0.15 kW	53.7 m	78. m	60. m
N 40 49 30.40	W 73 12 9.40			1057935	2.36 km	1.47 mi	41.28°	JUAN

ALBERTO AYALA

NOTE: THIS IS THE AUCTION 83 APPLICATION THAT IS BEING AMENDED BY THIS APPLICATION

WLIR-FM	296 A	FM	107.1 MHz	LIC	HAMPTON BAYS	NY	US	BLH-20070719AEB
	-		61089		4.1 kW DA	121. m	134. m	80. m
N 40 53 7.00	W 72 41 33.60			1007270	45.36 km	28.18 mi	79.05°	

LIVINGSTONE BROADCASTING, INC.

Protected Contour Dist: 29.3 km Prop 296D Interf Contour Dist: 19.1 km
Result: -3.0 km SHORT (WORST-CAST STUDY); See Contour Non-overlap Showing

WBSL	298 B	FM	107.5 MHz	LIC	NEW YORK	NY	US	BLH-19940204KN
	-		28203		4.2 kW	415. m	429. m	413. m
N 40 44 54.00	W 73 59 10.00			-	64.93 km	40.35 mi	264.26°	YMF

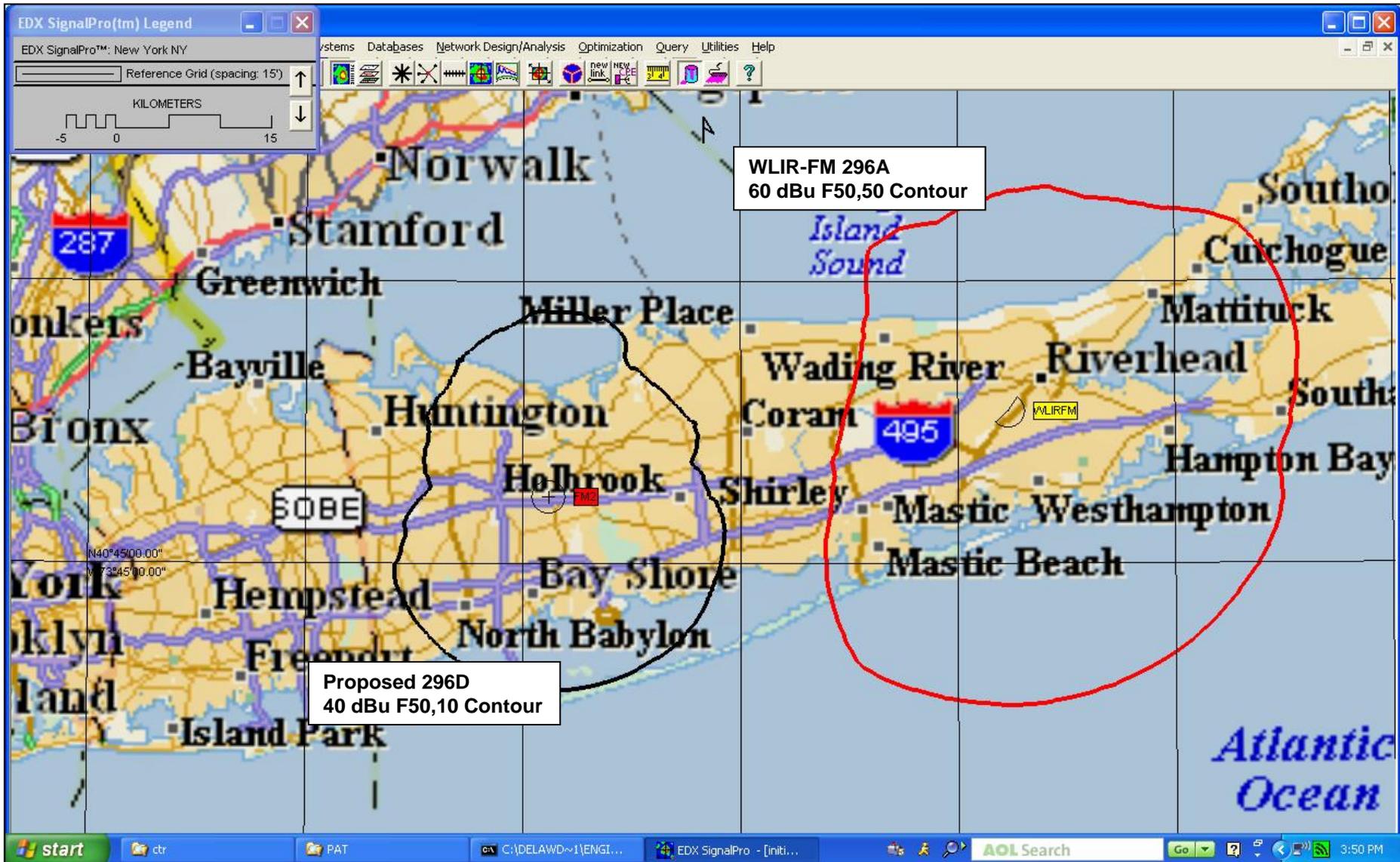
MEDIA NEW YORK LICENSEE LLC

Protected Contour Dist: 62.9 km Prop 296D Interf Contour Dist: <1.0 km
Result: >1.0 km CLEAR (WORST-CAST STUDY)

Study Complete

FIGURE EE2

HAUPPAUGE, NY 296D Contour Non-Overlap Showing to WLIR-FM



Shively Labs[®]

Antenna Mfr.: Shively Labs

Date: 12/30/2004

Antenna Type: 6014, 6015, 6510, 6513, 6600, 68xx 7-Bay, 1/2-wave-spaced

Frequency: 98.1

6014, 6015, 68xx Gain (Max)	2.23	3.48 dB
6510, 6513, 6600 Gain (Max)	4.46	6.48 dB

FIGURE EE3 (Page 1 of 2)

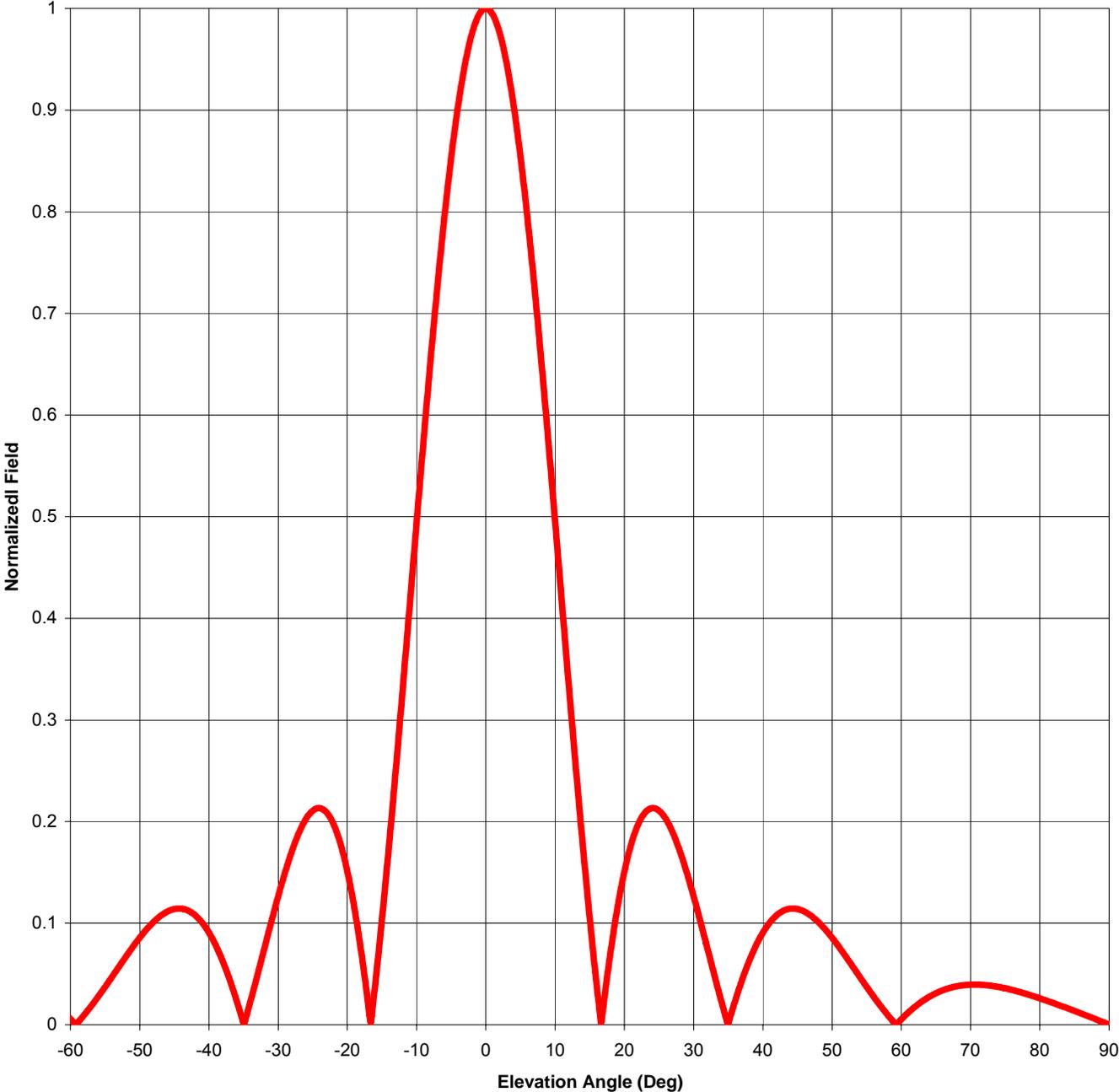


FIGURE EE3 (Page 2 of 2)

Elevation Pattern Tabulation, Sidemount 7-Bay Antennas, Half-Wave-Spaced

Includes Models 6014, 6015, 66xx series except 6602B, 65xx series, 68xx series except 6812B & 6832.

Relative Field at 0° Depression = 1.000

Degrees	Rel. Field								
1	0.994	19	0.115	37	0.044	55	0.037	73	0.038
2	0.976	20	0.151	38	0.062	56	0.028	74	0.037
3	0.946	21	0.178	39	0.078	57	0.019	75	0.036
4	0.905	22	0.197	40	0.091	58	0.010	76	0.034
5	0.854	23	0.209	41	0.101	59	0.002	77	0.033
6	0.794	24	0.213	42	0.108	60	0.005	78	0.031
7	0.727	25	0.211	43	0.112	61	0.012	79	0.028
8	0.654	26	0.202	44	0.114	62	0.018	80	0.026
9	0.576	27	0.189	45	0.114	63	0.023	81	0.024
10	0.495	28	0.171	46	0.111	64	0.027	82	0.021
11	0.413	29	0.150	47	0.107	65	0.031	83	0.019
12	0.332	30	0.126	48	0.101	66	0.034	84	0.016
13	0.252	31	0.101	49	0.094	67	0.036	85	0.014
14	0.176	32	0.075	50	0.086	68	0.038	86	0.011
15	0.105	33	0.049	51	0.077	69	0.039	87	0.008
16	0.039	34	0.023	52	0.067	70	0.040	88	0.006
17	0.020	35	0.001	53	0.057	71	0.040	89	0.003
18	0.072	36	0.024	54	0.047	72	0.039	90	0.000

FIGURE EE4 - STUDY PROTECTING WLTW 294B
FREE SPACE FIELD STRENGTH AT A DISTANCE STUDY RESULTS

PROJECT: HAUPPAUGE, NY, CHANNEL 296D

16-Apr-13

Point	Column A Vertical Distance From Antenna Bottom (meters)	Column B Horizontal Distance From Tower Base (meters)	Column C Hypotenuse Distance From Antenna Bottom (meters)	Column D Downward Angle From Antenna Bottom (degrees)	Column E Max ERP (watts)	Column F Max ERP (dBmW)	Column G Pattern Relative Field at Down- ward Angle	Column H Free Space Inter- ferring Signal (dBu)	Column I Adjusted ERP in Down- ward Angle (dBmW)	Column J OUTPUT Distance (meters)
1	53	0.1	53.0	89.9	10	40.00	0.003	94.5	-10.46	1.3
2	53	10	53.9	79.3	10	40.00	0.028	94.5	8.94	11.7
3	53	20	56.6	69.3	10	40.00	0.039	94.5	11.82	16.4
4	53	30	60.9	60.5	10	40.00	0.005	94.5	-6.02	2.1
5	53	40	66.4	53.0	10	40.00	0.057	94.5	15.12	23.9
6	53	50	72.9	46.7	10	40.00	0.111	94.5	20.91	46.5
7	53	60	80.1	41.5	10	40.00	0.101	94.5	20.09	42.3
8	53	70	87.8	37.1	10	40.00	0.044	94.5	12.87	18.4
9	53	80	96.0	33.5	10	40.00	0.049	94.5	13.80	20.5
10	53	90	104.4	30.5	10	40.00	0.126	94.5	22.01	52.8
11	53	100	113.2	27.9	10	40.00	0.189	94.5	25.53	79.2
12	53	120	131.2	23.8	10	40.00	0.209	94.5	26.40	87.6
13	53	200	206.9	14.8	10	40.00	0.176	94.5	24.91	73.8
14	53	300	304.6	10.0	10	40.00	0.495	94.5	33.89	207.5
15	53	400	403.5	7.5	10	40.00	0.727	94.5	37.23	304.8
16	53	500	502.8	6.1	10	40.00	0.794	94.5	38.00	332.9
17	53	600	602.3	5.0	10	40.00	1.000	94.5	40.00	419.3

NOTE: Study point at 2 meters above ground level.
Worst-case relative field of 1.000 used for last examined point.

RESULTS: COLUMN J DISTANCES ARE LESS THAN COLUMN C DISTANCES IN ALL INSTANCES; THEREFORE, INTERFERRING SIGNAL DOES NOT EXIST AT ANY LOCATION (TWO METERS OR LESS ABOVE GROUND LEVEL)