

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of FAITH BROADCASTING NETWORK, INC., licensee of full-power digital television station WNYB-DT, Channel 26 in Jamestown, New York, in support of its Application for Construction Permit to specify operation on its post-repack channel, Channel 5. No change in site location or antenna height is proposed herein.

It is proposed to mount a Dielectric omnidirectional antenna at the 313.4-meter level of the existing 323-meter tower on which the present WNYB-DT antenna is located. The proposed effective radiated power for the facility is 1.93 kW in horizontal plane, which is the allotted repack power level for WNYB-DT. Exhibit B is a map upon which the predicted 51 dBu service contour is plotted.

Elevation pattern data for the proposed Dielectric antenna appears in Exhibit C. Since the facility proposed herein specifies an omnidirectional antenna and the repack allotment facility assigned to WNYB-DT specifies a directional antenna (which cannot be duplicated in a Channel 5 antenna), an interference study is included as Exhibit D. As shown, the proposed facility does not create additional interference to any other co-channel or adjacent-channel post-repack facility. A detailed power density calculation is provided in Exhibit E.

Since no change in the overall height or location of the existing WNYB-DT tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1009129 to this tower.

EXHIBIT A

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher", with a stylized, elongated final letter.

KEVIN T. FISHER

June 27, 2017

CONTOUR POPULATION
2015 U.S. CENSUS DATA
CITY-GRADE : 1,582,703 (740,118 HH)
NOISE-LIMITED : 1,750,869 (818,066 HH)



EXHIBIT B
PREDICTED SERVICE CONTOURS
PROPOSED WNYB-DT
CH. 5 - JAMESTOWN, NEW YORK

ELEVATION PATTERN

EXHIBIT C

Exhibit No.

Date

27 Jun 2017

Call Letters

Channel

5

Antenna Type

TDM-5A

Location

Customer

Future fill is available!

RMS Gain at Main Lobe **2.2 (3.42 dB)**

RMS Gain at Horizontal **2.2 (3.35 dB)**

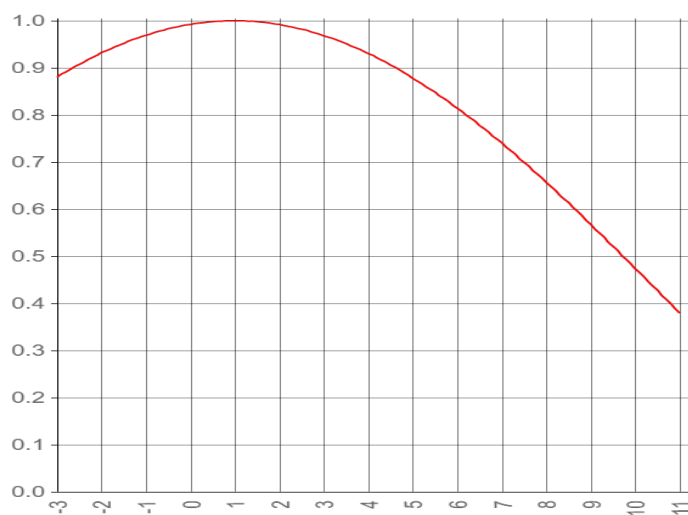
Calculated

Beam Tilt

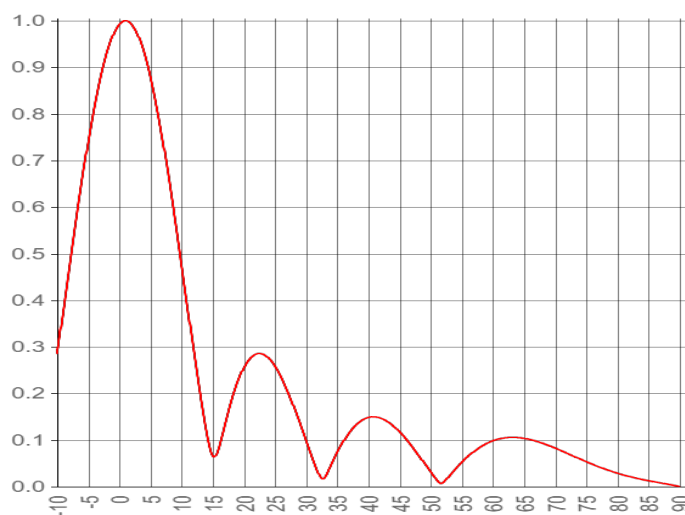
1 Degrees

Drawing #

05D022100



Degrees below horizontal



Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.285	10	0.474	30	0.099	50	0.032	70	0.083
-9	0.379	11	0.379	31	0.062	51	0.014	71	0.077
-8	0.474	12	0.286	32	0.028	52	0.009	72	0.071
-7	0.568	13	0.197	33	0.020	53	0.023	73	0.065
-6	0.658	14	0.118	34	0.047	54	0.039	74	0.059
-5	0.741	15	0.067	35	0.074	55	0.053	75	0.054
-4	0.816	16	0.085	36	0.098	56	0.065	76	0.048
-3	0.880	17	0.136	37	0.118	57	0.076	77	0.043
-2	0.932	18	0.185	38	0.133	58	0.086	78	0.038
-1	0.969	19	0.225	39	0.143	59	0.093	79	0.033
0	0.992	20	0.256	40	0.149	60	0.099	80	0.029
1	1.000	21	0.275	41	0.150	61	0.103	81	0.025
2	0.992	22	0.285	42	0.147	62	0.105	82	0.022
3	0.968	23	0.285	43	0.140	63	0.106	83	0.018
4	0.930	24	0.275	44	0.130	64	0.105	84	0.015
5	0.878	25	0.258	45	0.118	65	0.104	85	0.013
6	0.814	26	0.234	46	0.103	66	0.101	86	0.010
7	0.740	27	0.205	47	0.086	67	0.097	87	0.008
8	0.657	28	0.172	48	0.068	68	0.093	88	0.006
9	0.567	29	0.136	49	0.050	69	0.088	89	0.003

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EXHIBIT D

TVSTUDY INTERFERENCE ANALYSIS RESULTS PROPOSED WNYB-DT CHANNEL 5 – JAMESTOWN, NEW YORK

Study created: 2017.06.27 16:36:06

Study build station data: LMS TV 2017-04-14 (2)

Proposal: WNYB D5 DT BL JAMESTOWN, NY
File number: DTVBL30303
Facility ID: 30303
Station data: User record
Record ID: 17
Country: U.S.

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WLMB	D5	DT	LIC	TOLEDO, OH	BLCDT20050201AAF	401.7 km
WDTV	D5	DT	LIC	WESTON, WV	BLCDT20090612AJX	356.3
WKBS-TV	D6	DT	BL	ALTOONA, PA	DTVBL13929	213.3

Data is not available for AM station check

Record parameters as studied:

Channel: D5
Latitude: 42 23 36.00 N (NAD83)
Longitude: 79 13 43.00 W
Height AMSL: 858.0 m
HAAT: 463.0 m
Peak ERP: 1.93 kW
Antenna: 0.0 deg

28.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.93 kW	567.9 m	108.2 km
45.0	1.93	474.1	101.8
90.0	1.93	404.4	97.3
135.0	1.93	358.4	94.9
180.0	1.93	337.2	94.1
225.0	1.93	417.7	98.1
270.0	1.93	529.9	106.1
315.0	1.93	598.7	109.6

Database HAAT does not agree with computed HAAT

Database HAAT: 463 m Computed HAAT: 461 m

****Proposal service area extends beyond baseline plus 1.0%**

Proposal service area population is more than 95.0% of baseline

****Proposal is within coordination distance of Canadian border**

Distance to Canadian border: 54.0 km

Distance to Mexican border: 2419.8 km

Conditions at FCC monitoring station: Canandaigua NY

Bearing: 69.5 degrees Distance: 170.5 km

ERP: 1.93 kW Field strength: 1.6 dBu, 0.0 mV/m

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 272.2 degrees Distance: 2177.3 km

Study cell size: 2.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

No IX check failures found.

POWER DENSITY CALCULATION

PROPOSED WNYB-DT
CHANNEL 5 – JAMESTOWN, NEW YORK

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Jamestown facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 1.93 kW (H,V), an antenna radiation center 313.4 meters above ground, and the specific elevation pattern of the proposed Dielectric antenna, maximum power density two meters above ground of 0.000012 mW/cm^2 is calculated to occur 159 meters from the base of the tower. Since this is significantly less than 0.1 percent of the 0.2 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 5 (76-82 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.