

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of RADIANT LIFE MINISTRIES, INC., licensee of full-power television station WNYB-DT, Channel 5 in Jamestown, New York, in support of this amendment to its pending Application for Construction Permit to operate its digital replacement translator (DRT) on Channel 27 in Buffalo, New York, with additional effective radiated power. It is proposed herein to simply rotate the antenna an additional 10 degrees clockwise in order to satisfy the Commission's DRT overlap Rules. No change in site location, effective radiated power, antenna make/model, antenna height above ground or antenna height above mean sea level from that proposed in LMS-0000241338 is specified herein.

It is still intended to utilize the licensed DRT antenna, a Dielectric TUM-C1-02/02M-T elliptically polarized directional antenna, which is mounted at the 243.8-meter level of an existing 345.6-meter communications tower near Grand Island, New York. The proposed effective radiated power for the facility is 15.0 kW in the horizontal plane. Exhibit B is a map upon which we have plotted the predicted 51 dBu service contour of the newly proposed DRT facility in Buffalo. In Exhibit C, we provide a map on which the original WNYB-DT (Channel 26) 41 dBu and the proposed DRT 51 dBu service contours are plotted. As shown, the contour of the facility proposed herein is completely contained within that of the pre-repack WNYB-DT contour, as required by FCC Rules. Although coordination of this proposal with the Canadian is required, an interference study of the proposed facility reveals that it causes no predicted interference to any Canadian full-power or low-power station coverage within the Canadian border.

EXHIBIT A

Elevation and azimuth pattern data for the proposed Dielectric antenna appear in Exhibit D. Exhibit E contains the summary results from a TVStudy interference study, which was conducted using a cell size and increment spacing of 1.0 kilometer. It concludes that the proposed WNYB-DT digital replacement translator facility meets the Commission's *de minimis* interference criteria to all co-channel and adjacent-channel full-power and Class A and LPTV/translator facilities.

A detailed power density calculation is provided in Exhibit F.

Since no change in the overall height or location of the existing communications 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 1033433 to this tower.

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', is centered on the page.

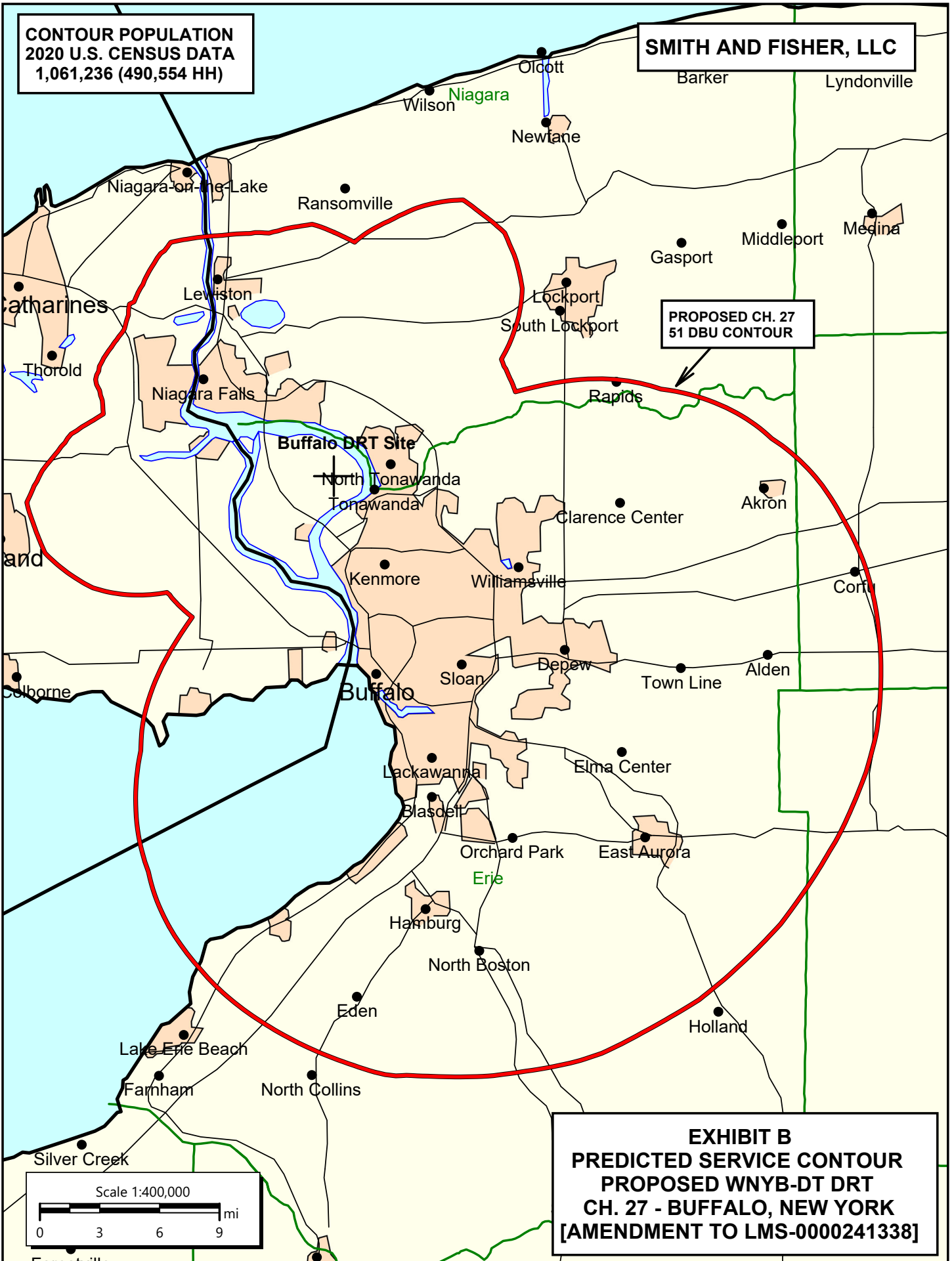
KEVIN T. FISHER

April 3, 2024

CONTOUR POPULATION
2020 U.S. CENSUS DATA
1,061,236 (490,554 HH)

SMITH AND FISHER, LLC

PROPOSED CH. 27
51 DBU CONTOUR



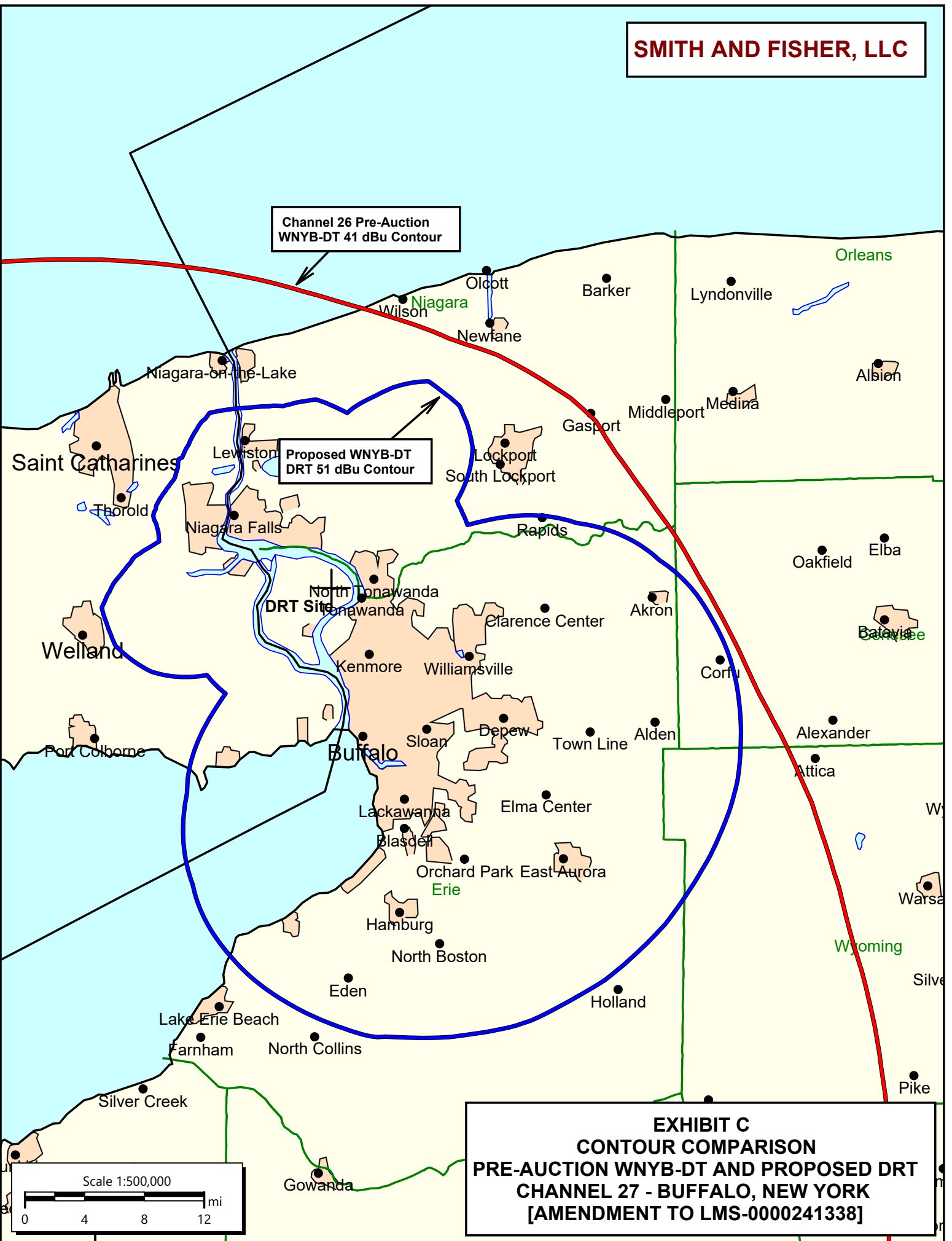


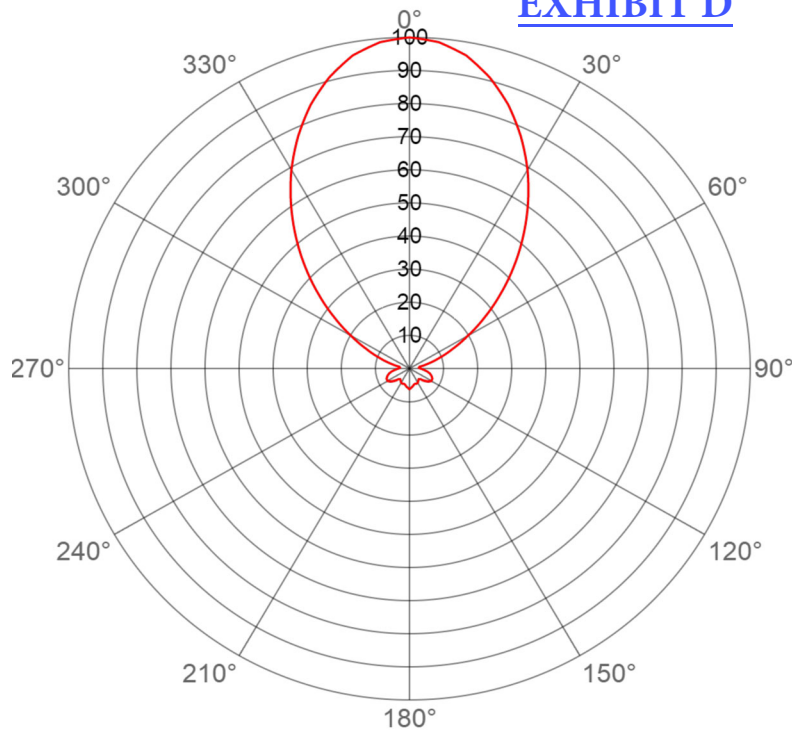
EXHIBIT D**Horizontal Polarization
AZIMUTH PATTERN**

Exhibit No. **D**
 Date **10 Sep 2020**
 Call Letters **WNYB-DT DRT**
 Channel **27**
 Antenna Type **TUM-TU-02/02M-T**
 Location **Buffalo, New York**
 Customer

Gain **5.8 (7.67 dB)**
Calculated
 Drawing # **TUM-C1B**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.589	72	0.079	108	0.067	144	0.044	180	0.062	216	0.044	252	0.067	288	0.079	324	0.589
1	0.998	37	0.571	73	0.071	109	0.068	145	0.045	181	0.061	217	0.044	253	0.066	289	0.086	325	0.606
2	0.996	38	0.554	74	0.064	110	0.069	146	0.046	182	0.060	218	0.043	254	0.064	290	0.093	326	0.624
3	0.994	39	0.536	75	0.057	111	0.070	147	0.046	183	0.059	219	0.043	255	0.063	291	0.103	327	0.641
4	0.991	40	0.518	76	0.051	112	0.071	148	0.047	184	0.058	220	0.042	256	0.061	292	0.112	328	0.658
5	0.989	41	0.501	77	0.046	113	0.072	149	0.048	185	0.057	221	0.043	257	0.059	293	0.121	329	0.676
6	0.983	42	0.484	78	0.041	114	0.073	150	0.049	186	0.057	222	0.043	258	0.057	294	0.130	330	0.693
7	0.977	43	0.466	79	0.035	115	0.074	151	0.049	187	0.056	223	0.044	259	0.055	295	0.140	331	0.709
8	0.972	44	0.449	80	0.030	116	0.074	152	0.049	188	0.055	224	0.045	260	0.053	296	0.151	332	0.725
9	0.966	45	0.432	81	0.029	117	0.074	153	0.049	189	0.055	225	0.045	261	0.051	297	0.163	333	0.741
10	0.960	46	0.415	82	0.029	118	0.074	154	0.049	190	0.054	226	0.048	262	0.048	298	0.175	334	0.757
11	0.950	47	0.398	83	0.029	119	0.074	155	0.050	191	0.053	227	0.050	263	0.046	299	0.186	335	0.773
12	0.940	48	0.381	84	0.028	120	0.074	156	0.049	192	0.052	228	0.052	264	0.044	300	0.198	336	0.788
13	0.930	49	0.365	85	0.028	121	0.073	157	0.049	193	0.051	229	0.055	265	0.041	301	0.212	337	0.803
14	0.920	50	0.348	86	0.029	122	0.072	158	0.049	194	0.050	230	0.057	266	0.039	302	0.227	338	0.818
15	0.910	51	0.332	87	0.029	123	0.070	159	0.048	195	0.050	231	0.059	267	0.037	303	0.241	339	0.833
16	0.897	52	0.316	88	0.030	124	0.069	160	0.048	196	0.049	232	0.061	268	0.035	304	0.255	340	0.848
17	0.885	53	0.301	89	0.031	125	0.068	161	0.048	197	0.049	233	0.063	269	0.034	305	0.269	341	0.860
18	0.873	54	0.285	90	0.032	126	0.065	162	0.049	198	0.049	234	0.065	270	0.032	306	0.285	342	0.873
19	0.860	55	0.269	91	0.034	127	0.063	163	0.049	199	0.048	235	0.068	271	0.031	307	0.301	343	0.885
20	0.848	56	0.255	92	0.035	128	0.061	164	0.049	200	0.048	236	0.069	272	0.030	308	0.316	344	0.897
21	0.833	57	0.241	93	0.037	129	0.059	165	0.050	201	0.048	237	0.070	273	0.029	309	0.332	345	0.910
22	0.818	58	0.227	94	0.039	130	0.057	166	0.050	202	0.049	238	0.072	274	0.029	310	0.348	346	0.920
23	0.803	59	0.212	95	0.041	131	0.055	167	0.051	203	0.049	239	0.073	275	0.028	311	0.365	347	0.930
24	0.788	60	0.198	96	0.044	132	0.052	168	0.052	204	0.049	240	0.074	276	0.028	312	0.381	348	0.940
25	0.773	61	0.186	97	0.046	133	0.050	169	0.053	205	0.050	241	0.074	277	0.029	313	0.398	349	0.950
26	0.757	62	0.175	98	0.048	134	0.048	170	0.054	206	0.049	242	0.074	278	0.029	314	0.415	350	0.960
27	0.741	63	0.163	99	0.051	135	0.045	171	0.055	207	0.049	243	0.074	279	0.029	315	0.432	351	0.966
28	0.725	64	0.151	100	0.053	136	0.045	172	0.055	208	0.049	244	0.074	280	0.030	316	0.449	352	0.972
29	0.709	65	0.140	101	0.055	137	0.044	173	0.056	209	0.049	245	0.074	281	0.035	317	0.466	353	0.977
30	0.693	66	0.130	102	0.057	138	0.043	174	0.057	210	0.049	246	0.073	282	0.041	318	0.484	354	0.983
31	0.676	67	0.121	103	0.059	139	0.043	175	0.057	211	0.048	247	0.072	283	0.046	319	0.501	355	0.989
32	0.658	68	0.112	104	0.061	140	0.042	176	0.058	212	0.047	248	0.071	284	0.051	320	0.518	356	0.991
33	0.641	69	0.103	105	0.063	141	0.043	177	0.059	213	0.046	249	0.070	285	0.057	321	0.536	357	0.994
34	0.624	70	0.093	106	0.064	142	0.043	178	0.060	214	0.046	250	0.069	286	0.064	322	0.554	358	0.996
35	0.606	71	0.086	107	0.066	143	0.044	179	0.061	215	0.045	251	0.068	287	0.071	323	0.571	359	0.998

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EXHIBIT D

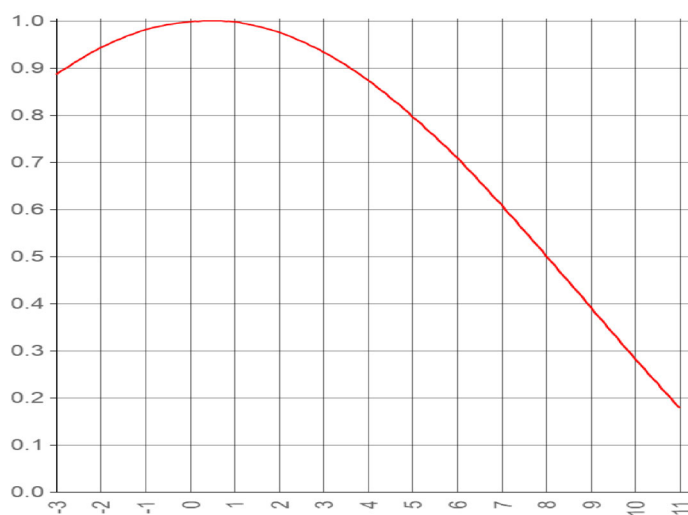
ELEVATION PATTERN

Exhibit No. **D**
Date **10 Sep 2020**
Call Letters **WNYB-DT DRT**
Channel **27**
Antenna Type **TUM-TU-02/02M-T**
Location **Buffalo, New York**
Customer

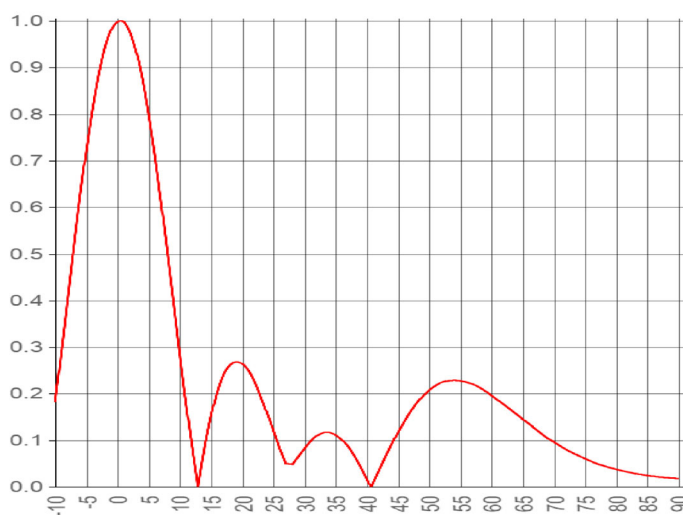
RMS Gain at Main Lobe **4.6 (6.60 dB)**

Beam Tilt **0.5 Degrees**

RMS Gain at Horizontal **4.6 (6.59 dB)**

Drawing # **02U046050**
Calculated


Degrees below horizontal



Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.182	10	0.283	30	0.082	50	0.208	70	0.096
-9	0.292	11	0.178	31	0.098	51	0.217	71	0.088
-8	0.404	12	0.080	32	0.110	52	0.224	72	0.080
-7	0.516	13	0.010	33	0.116	53	0.227	73	0.073
-6	0.625	14	0.088	34	0.117	54	0.229	74	0.066
-5	0.723	15	0.153	35	0.111	55	0.227	75	0.060
-4	0.812	16	0.204	36	0.101	56	0.225	76	0.055
-3	0.886	17	0.241	37	0.086	57	0.220	77	0.049
-2	0.943	18	0.261	38	0.066	58	0.214	78	0.045
-1	0.981	19	0.268	39	0.043	59	0.205	79	0.041
0	0.998	20	0.264	40	0.017	60	0.196	80	0.038
1	0.998	21	0.250	41	0.010	61	0.186	81	0.034
2	0.976	22	0.225	42	0.038	62	0.176	82	0.031
3	0.934	23	0.192	43	0.066	63	0.166	83	0.028
4	0.874	24	0.157	44	0.092	64	0.156	84	0.027
5	0.797	25	0.120	45	0.118	65	0.145	85	0.024
6	0.710	26	0.082	46	0.141	66	0.135	86	0.023
7	0.609	27	0.050	47	0.162	67	0.124	87	0.021
8	0.501	28	0.048	48	0.180	68	0.114	88	0.020
9	0.392	29	0.065	49	0.195	69	0.104	89	0.019

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EXHIBIT E

TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED WNYB-DT DRT
CHANNEL 27 – BUFFALO, NEW YORK
[AMENDMENT TO LMS-0000241338]

Study build station data: LMS TV 2024-03-27
Proposal: WNYB D27 LD APP JAMESTOWN, NY
File number: BLANK0000241338
Facility ID: 30303
Station data: User record
Record ID: 116
Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WAWW-LD	N20-	TX	LIC	Rochester, NY	BLTTL20121029AAV	109.1 km
No	WGCE-CD	D26	DC	LIC	ROCHESTER, NY	BLANK0000116989	109.1
No	WPBS-TV	D26	DT	LIC	WATERTOWN, NY	BLANK0000081158	273.8
No	WFXP	D26	DT	LIC	ERIE, PA	BLANK0000081009	144.7
No	WMAR-TV	D27	DT	LIC	BALTIMORE, MD	BLANK0000136334	452.5
No	WADL	D27	DT	LIC	MOUNT CLEMENS, MI	BLANK0000111708	327.8
No	WIVT	D27	DT	LIC	BINGHAMTON, NY	BLANK0000090477	266.5
No	WMJQ-CD	D27	DC	LIC	SYRACUSE, NY	BLANK0000121173	223.7
No	WOCV-CD	D27	DC	LIC	CLEVELAND, OH	BLANK0000202416	292.7
No	W27DG-D	D27	LD	LIC	MILLERSBURG, OH	BLANK0000168187	303.2
Yes	WQLN	D27	DT	LIC	ERIE, PA	BLANK0000083708	144.4
No	WOLF-TV	D27	LD	LIC	HAZLETON, PA	BLANK0000155439	326.5
No	WTAE-TV	D27	DT	LIC	PITTSBURGH, PA	BLANK0000112576	314.3
No	WHVL-LD	D27	LD	LIC	STATE COLLEGE, ETC., PA	BLANK0000006251	247.3
No	W27EE-D	D27	LD	LIC	MARTINSBURG, WV	BLANK0000204148	403.2
No	WUHF	D28	DT	LIC	ROCHESTER, NY	BLANK0000211751	109.1
No	WJET-TV	D28	DT	LIC	ERIE, PA	BLANK0000080704	144.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D27
Mask: Full Service
Latitude: 43 1 48.20 N (NAD83)
Longitude: 78 55 14.10 W
Height AMSL: 419.7 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: Dielectric-TUM-TU-02/02M-T (ID 1011563) 145.0 deg
Elev Pattn: Generic
Elec Tilt: 0.50

50.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.031 kW	236.1 m	20.9 km
45.0	0.042	242.1	22.7
90.0	1.12	244.0	39.9
135.0	13.8	227.8	52.1
180.0	5.50	240.4	48.0
225.0	0.013	242.4	16.9
270.0	0.064	245.0	25.0
315.0	0.044	246.2	23.1

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 240 m

**Proposal 25.05 dBu contour crosses Canadian border, coordination required
Distance to Canadian border: 7.0 km

Distance to Mexican border: 2477.4 km

Conditions at FCC monitoring station: Canandaigua NY
Bearing: 94.9 degrees Distance: 135.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 270.6 degrees Distance: 2200.7 km

Study cell size: 1.00 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 DIGITAL REPLACEMENT TRANSLATOR
CHANNEL 27 – BUFFALO, NEW YORK
[AMENDMENT TO LMS-0000241338]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Buffalo facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15.0 kW (H, V), an antenna radiation center 243.8 meters above ground, and the specific elevation pattern of the proposed Dielectric TUM-C1-02/02M-T antenna, maximum power density two meters above ground of 0.00059 mW/cm² is calculated to occur 176 meters southeast of the base of the tower. Since this value is only 0.2 percent of the 0.37 mW/cm² reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 27 (548-554 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.