

**ENGINEERING STATEMENT**

**IN SUPPORT OF**

**APPLICATION FOR MINOR MODIFICATION OF A LICENSED FACILITY**

**WXTM-LD**

**ERIE, PA**

**Background**

Condado Holdings, LLC (Condado), is seeking, in its instant application, to change the transmit location and antenna for WXTM-LD.

**Proposed Parameters**

Condado is proposing the following parameters for the WXTM-LD digital operation on Ch. 18:

Coordinates:	42° 02' 16.2.0" N (NAD83) 80° 03' 42.8" W
ERP:	7.0 kW
RCAMSL:	561.6m
RCAGL:	151.3m
Antenna:	Dielectric TLP-8H/VP
Mask:	Full-Service

### **Antenna System and Tower**

Condado intends to install a new side-mounted, directional antenna, a Dielectric TLP-8H/VP, on the registered tower ASR#1055828. The new antenna will be elliptically polarized. The vertically polarized radiation will not exceed the horizontally polarized component in any azimuth.

### **Interference**

An interference study was conducted of the proposed facility parameters using the FCC TVStudy software (Version 2.2.5) with the default parameters. The results of the study (copy attached hereto) show that potential interference from the proposed facility is not predicted to exceed 0.49% to any full-service DTV or Class A stations or 1.99% to any low power stations as required by the Commission's Rules.

### **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed facility is a multi-user site and it is assumed to currently be "in compliance" with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst-case ground level RFR contributed to the site by this proposal is calculated to be 0.000698 mW/cm<sup>2</sup> at 2m AGL. The calculated RFR is less than 5% of the maximum permissible exposure (MPE) for public areas (0.331333 mW/cm<sup>2</sup>) at Ch. 18. Per Section 1.1307(b) of the FCC Rules, the proposed operation would be categorically excluded from

taking corrective action in areas with levels above the MPE limit where the contribution to the RFR from the proposed facility is less than 5%.

Condado, agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.



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Benjamin Pidek, P.E.  
April 2, 2023

Attached:  
TVStudy Interference Check Report for Proposed WXTM-LD Facility  
Antenna Azimuth and Elevation Pattern Plots and Tabulations

## TVStudy TV Interference Check Report for Proposed WXTM-LD Facility on Ch. 18

Study created: 2023.04.02 20:39:56

Study build station data: LMS TV 2023-03-27

Proposal: WXTM-LD D18 LD LIC ERIE, PA  
File number: WXTM\_C18\_PchTwr\_TLPHr150  
Facility ID: 187763  
Station data: User record  
Record ID: 305  
Country: U.S.

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

Search options:  
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WBNX-TV	D17	DT	LIC	AKRON, OH	BLANK0000100132	153.8 km
No	WJMB-CD	D17	DC	LIC	BUTLER, PA	BLDTA20121108ALX	124.4
No	WJMB-CD	D17	DC	CP	BUTLER, PA	BLANK0000131009	124.4
No	W30CO-D	D17	LD	CP	WHEELING, WV	BLANK0000204147	227.2
No	W30CO-D	D17	LD	APP	WHEELING, WV	BLANK0000212915	206.7
No	WFWA	D18	DT	LIC	FORT WAYNE, IN	BLANK0000063130	438.9
No	WEYI-TV	D18	DT	LIC	SAGINAW, MI	BLANK0000185142	326.7
No	WDTB-LD	D18	LD	LIC	HAMBURG, NY	BLANK0000202870	135.0
No	WDTB-LD	D18	LD	CP	HAMBURG, NY	BLANK0000203255	135.3
No	WTVH	D18	DT	LIC	SYRACUSE, NY	BLANK0000136484	338.5
No	W18EY-D	D18	LD	LIC	CANTON, OH	BLANK0000195951	225.2
No	W18EY-D	D18	LD	APP	CANTON, OH	BLANK0000212511	225.2
No	WCBZ-CD	D18	DC	LIC	Columbus, OH	BLANK0000069165	324.8
No	W18ES-D	D18	LD	LIC	MANSFIELD, OH	BLANK0000087113	250.4
Yes	WOIO	D18	LD	LIC	SHAKER HEIGHTS, OH	BLANK0000079849	166.4
No	WDTJ-LD	D18	LD	CP	TOLEDO, OH	BLANK0000158049	291.8
No	WDTJ-LD	D18	LD	LIC	TOLEDO, OH	BLDTL20121219ABP	291.8
No	WLTX-TV	D18	DT	LIC	CHARLESTON, WV	BLANK0000118002	432.7
No	W18FB-D	D18	LD	LIC	SUTTON, WV	BLANK0000197243	379.1
No	WKYC	D19	DT	LIC	CLEVELAND, OH	BLANK0000087282	153.2
Yes	WEPA-LD	D19	LD	LIC	ERIE, PA	BLANK0000178503	9.9
No	WBYD-CD	D19	DC	LIC	PITTSBURGH, PA	BLANK0000096151	179.9
No	WSPZ-LD	D19	LD	LIC	STATE COLLEGE, PA	BLANK0000146397	213.7
No	CICA-DT	D19	DT	LIC	TORONTO, ON	BLANKCANADA233	186.6

No non-directional AM stations found within 0.8 km

Directional AM stations within 3.2 km:  
WRIE 1260 L DA2 D ERIE, PA BL13412  
WRIE 1260 L DA2 N ERIE, PA BL13412

Record parameters as studied:

Channel: D18  
Mask: Full Service  
Latitude: 42 2 16.20 N (NAD83)  
Longitude: 80 3 42.80 W  
Height AMSL: 561.6 m  
HAAT: 0.0 m

Peak ERP: 7.00 kW  
Antenna: DIE DLP-8H 150.0 deg  
Elev Pattn: Generic  
Elec Tilt: 1.50

49.1 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.39 kW	334.4 m	46.6 km
45.0	5.13	200.8	46.5
90.0	4.40	152.5	42.8
135.0	6.59	162.8	45.6
180.0	4.96	135.5	42.3
225.0	5.15	187.5	45.8
270.0	3.17	281.4	48.4
315.0	1.57	339.5	47.6

Database HAAT does not agree with computed HAAT  
Database HAAT: 0 m    Computed HAAT: 224 m

\*\*Proposal 24.15 dBu contour crosses Canadian border, coordination required  
Distance to Canadian border: 39.6 km

Distance to Mexican border: 2340.7 km

Conditions at FCC monitoring station: Canandaigua NY  
Bearing: 66.1 degrees    Distance: 249.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 272.8 degrees    Distance: 2110.5 km

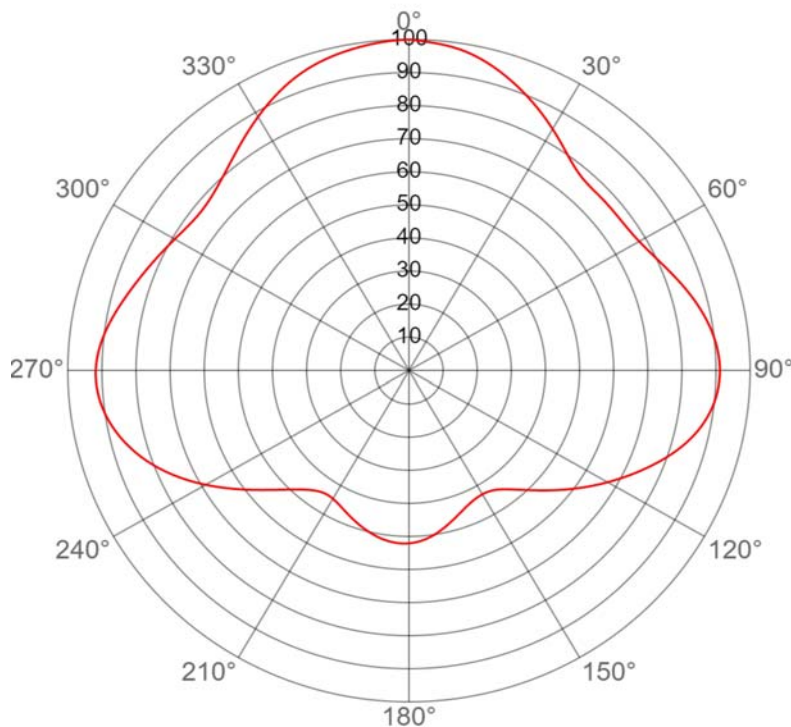
**No land mobile station failures found**

Proposal is not within the Offshore Radio Service protected area

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.**



## Horizontal Polarization AZIMUTH PATTERN

Exhibit No.  
Date **2 Apr 2023**  
Call Letters **WXTM-LD**  
Channel **18**  
Antenna Type **TLP-8H/VP-R**  
Location **Erie, PA**  
Customer **Lilly**

Gain **1.7 (2.30 dB)**  
Calculated  
Drawing # **TLP-H**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.797	72	0.841	108	0.810	144	0.443	180	0.521	216	0.450	252	0.830	288	0.844	324	0.842
1	0.998	37	0.791	73	0.847	109	0.800	145	0.439	181	0.522	217	0.453	253	0.839	289	0.839	325	0.849
2	0.996	38	0.785	74	0.853	110	0.788	146	0.436	182	0.522	218	0.458	254	0.848	290	0.834	326	0.856
3	0.994	39	0.780	75	0.858	111	0.777	147	0.433	183	0.522	219	0.463	255	0.856	291	0.830	327	0.863
4	0.993	40	0.776	76	0.864	112	0.766	148	0.432	184	0.521	220	0.468	256	0.864	292	0.825	328	0.870
5	0.991	41	0.773	77	0.870	113	0.754	149	0.431	185	0.520	221	0.475	257	0.872	293	0.821	329	0.878
6	0.989	42	0.770	78	0.875	114	0.742	150	0.430	186	0.519	222	0.482	258	0.879	294	0.816	330	0.885
7	0.986	43	0.769	79	0.880	115	0.731	151	0.430	187	0.517	223	0.490	259	0.885	295	0.812	331	0.892
8	0.984	44	0.768	80	0.885	116	0.719	152	0.431	188	0.515	224	0.498	260	0.891	296	0.808	332	0.899
9	0.980	45	0.768	81	0.890	117	0.707	153	0.432	189	0.513	225	0.507	261	0.896	297	0.804	333	0.906
10	0.977	46	0.768	82	0.894	118	0.696	154	0.434	190	0.511	226	0.517	262	0.901	298	0.800	334	0.913
11	0.972	47	0.768	83	0.898	119	0.684	155	0.436	191	0.508	227	0.527	263	0.906	299	0.796	335	0.919
12	0.968	48	0.768	84	0.901	120	0.673	156	0.438	192	0.505	228	0.537	264	0.909	300	0.793	336	0.926
13	0.962	49	0.768	85	0.904	121	0.661	157	0.441	193	0.502	229	0.548	265	0.912	301	0.789	337	0.932
14	0.957	50	0.768	86	0.906	122	0.650	158	0.444	194	0.499	230	0.560	266	0.915	302	0.786	338	0.938
15	0.951	51	0.768	87	0.909	123	0.638	159	0.448	195	0.496	231	0.571	267	0.917	303	0.783	339	0.944
16	0.945	52	0.768	88	0.910	124	0.627	160	0.452	196	0.492	232	0.584	268	0.918	304	0.781	340	0.949
17	0.938	53	0.769	89	0.911	125	0.615	161	0.456	197	0.489	233	0.596	269	0.918	305	0.779	341	0.954
18	0.931	54	0.769	90	0.911	126	0.604	162	0.460	198	0.485	234	0.609	270	0.918	306	0.777	342	0.958
19	0.924	55	0.770	91	0.911	127	0.593	163	0.464	199	0.481	235	0.622	271	0.917	307	0.776	343	0.963
20	0.917	56	0.771	92	0.910	128	0.582	164	0.468	200	0.477	236	0.635	272	0.915	308	0.776	344	0.967
21	0.910	57	0.772	93	0.909	129	0.571	165	0.473	201	0.474	237	0.648	273	0.913	309	0.776	345	0.970
22	0.903	58	0.774	94	0.906	130	0.560	166	0.477	202	0.470	238	0.661	274	0.911	310	0.777	346	0.973
23	0.896	59	0.776	95	0.904	131	0.550	167	0.482	203	0.466	239	0.675	275	0.907	311	0.779	347	0.976
24	0.888	60	0.779	96	0.900	132	0.539	168	0.486	204	0.463	240	0.688	276	0.904	312	0.781	348	0.979
25	0.881	61	0.783	97	0.896	133	0.529	169	0.491	205	0.459	241	0.701	277	0.900	313	0.784	349	0.982
26	0.873	62	0.786	98	0.891	134	0.519	170	0.495	206	0.456	242	0.714	278	0.895	314	0.787	350	0.984
27	0.865	63	0.791	99	0.886	135	0.510	171	0.499	207	0.453	243	0.727	279	0.890	315	0.791	351	0.986
28	0.858	64	0.795	100	0.880	136	0.500	172	0.503	208	0.450	244	0.740	280	0.885	316	0.795	352	0.989
29	0.850	65	0.800	101	0.873	137	0.492	173	0.506	209	0.448	245	0.752	281	0.880	317	0.800	353	0.991
30	0.842	66	0.805	102	0.866	138	0.483	174	0.509	210	0.446	246	0.765	282	0.875	318	0.805	354	0.993
31	0.834	67	0.811	103	0.858	139	0.475	175	0.512	211	0.445	247	0.777	283	0.870	319	0.811	355	0.994
32	0.827	68	0.817	104	0.850	140	0.467	176	0.515	212	0.444	248	0.788	284	0.865	320	0.816	356	0.996
33	0.819	69	0.823	105	0.841	141	0.460	177	0.517	213	0.444	249	0.799	285	0.859	321	0.822	357	0.997
34	0.811	70	0.828	106	0.831	142	0.454	178	0.519	214	0.445	250	0.810	286	0.854	322	0.829	358	0.998
35	0.804	71	0.835	107	0.821	143	0.448	179	0.520	215	0.447	251	0.820	287	0.849	323	0.835	359	0.999

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## ELEVATION PATTERN

Exhibit No.

Date

**2 Apr 2023**

Call Letters

**WXTM-LD**

Channel

**18**

Antenna Type

**TLP-8H/VP-R**

Location

**Erie, PA**

Customer

**Lilly**

RMS Gain at Main Lobe

**8.0 (9.03 dB)**

Beam Tilt

**1.5 Degrees**

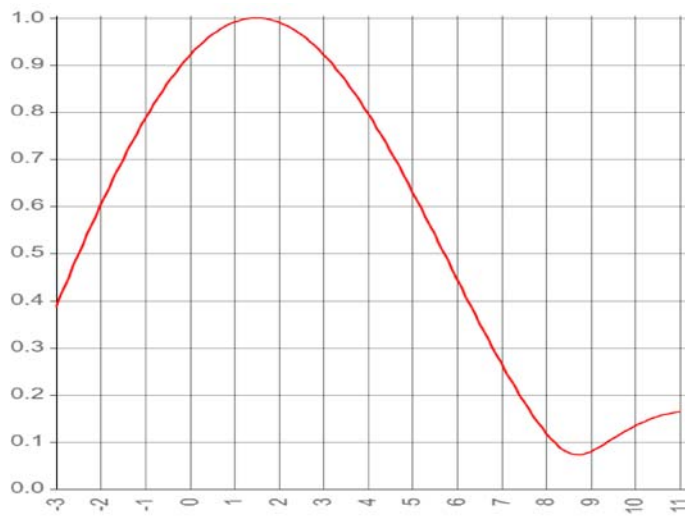
RMS Gain at Horizontal

**6.8 (8.32 dB)**

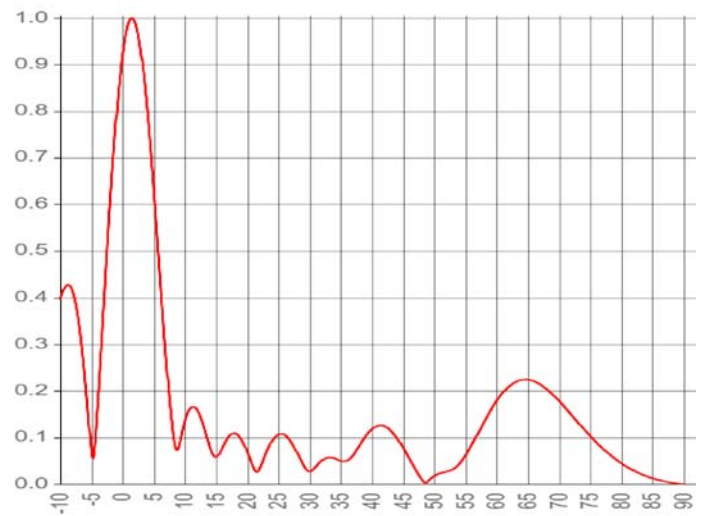
Drawing #

**08L080150**

**Calculated**



Degrees below horizontal



Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.396	10	0.134	30	0.027	50	0.018	70	0.179
-9	0.427	11	0.164	31	0.037	51	0.024	71	0.164
-8	0.413	12	0.158	32	0.051	52	0.027	72	0.148
-7	0.346	13	0.124	33	0.057	53	0.032	73	0.133
-6	0.225	14	0.080	34	0.055	54	0.044	74	0.118
-5	0.072	15	0.058	35	0.050	55	0.062	75	0.103
-4	0.169	16	0.078	36	0.050	56	0.085	76	0.089
-3	0.387	17	0.102	37	0.063	57	0.109	77	0.077
-2	0.601	18	0.109	38	0.083	58	0.134	78	0.065
-1	0.786	19	0.097	39	0.103	59	0.158	79	0.054
0	0.921	20	0.069	40	0.118	60	0.179	80	0.045
1	0.991	21	0.035	41	0.125	61	0.197	81	0.036
2	0.991	22	0.033	42	0.124	62	0.210	82	0.029
3	0.923	23	0.066	43	0.115	63	0.219	83	0.023
4	0.797	24	0.093	44	0.099	64	0.224	84	0.017
5	0.631	25	0.107	45	0.078	65	0.224	85	0.013
6	0.446	26	0.106	46	0.054	66	0.221	86	0.009
7	0.266	27	0.091	47	0.031	67	0.214	87	0.005
8	0.119	28	0.067	48	0.011	68	0.204	88	0.003
9	0.079	29	0.041	49	0.007	69	0.192	89	0.001

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