

ENGINEERING EXHIBIT

Digital Low Power Television Station Application for Minor Modification of Licensed Facility prepared for

Gray Television Licensee, LLC
W19EX-D Gainesville, FL
Facility ID 182301
Ch. 19 15 kW Directional

Gray Television Licensee, LLC (“Gray”) is the licensee of digital Low Power Television station W19EX-D, Channel 19, Facility ID 182301, Gainesville FL. W19EX-D is licensed to operate at 0.2 kW effective radiated power (“ERP”) with a directional antenna (file# 0000212386). *Gray* herein seeks a minor modification Construction Permit to relocate W19EX-D and to utilize a different directional antenna at increased ERP and antenna height.

The proposed facility will employ a new side-mounted antenna on the tower structure associated with FCC Antenna Structure Registration number 1035360, located 19.7 km (12.2 miles) from the licensed site. No change to the overall structure height is proposed. The antenna supporting structure is owned by *Gray* and is utilized by *Gray*’s full-power television station WCJB-TV (Facility ID 16993, Gainesville FL).

The proposed antenna is a Dielectric model TLP-8F/VP OS having elliptical polarization. The proposed ERP is 15 kW horizontally polarized and 4.5 kW vertically polarized using a “full service” out of channel emission mask. A plot of the directional antenna’s azimuthal pattern is supplied in Figure 1.

Figure 2 depicts the coverage contour of the proposed facility as well as that of the licensed facility, demonstrating compliance with §73.3572 for a minor change. Since the proposed 51 dB μ contour encompasses that of the licensed facility, no service loss area will be created. The population within the 51 dB μ contour increases to 269,771 persons (2010 census), which is a

53-fold increase beyond the 5,044 persons within the licensed W19EX-D facility's 51 dBμ contour.

Interference study per OET Bulletin 69¹ shows that the proposal complies with the FCC's interference protection requirements toward all digital television, television translator, LPTV, and Class A stations. FCC processing of this proposal is requested using a 1.0 km cell size and 0.1 km terrain profile increment. The results, summarized in Table 1, show that any new interference does not exceed the FCC's interference limits (0.5 percent to full power and Class A stations, and 2.0 percent to secondary stations) to any facility.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The proposed facility was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10) and 15 percent antenna relative field in downward elevations (pattern data shows 15 percent or less relative field at angles 20 to 90 degrees below the antenna), the calculated power density attributable to the proposed facility at locations near the transmitter site at a height of two meters above ground level is 0.35 μW/cm², which is 0.1 percent of the general population / uncontrolled maximum permissible exposure limit. This is well below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This

¹FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). This analysis employed the FCC's current "TVStudy" software with the default application processing template settings, 1 km cell size, and 0.1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's implementation of TVStudy show excellent correlation.

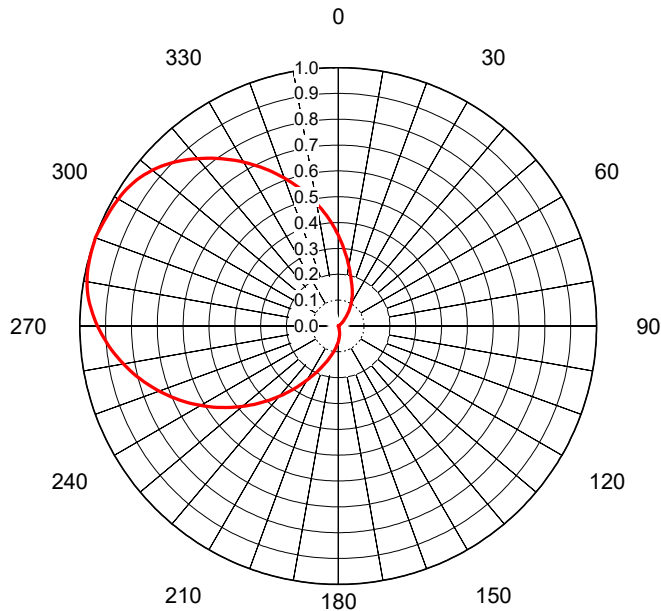
exhibit is limited to the evaluation of exposure to RF electromagnetic field. No increase in structure height is proposed.

List of Attachments

Figure 1	Antenna Azimuthal Pattern
Figure 2	Coverage Contour Comparison
Table 1	TVStudy Analysis of Proposal
Form 2100	Saved Version of Engineering Sections of FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	March 30, 2023	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-80023-1**
Date **28-Mar-23**
Call Letters **W19EX-D**
Channel **19**
Frequency **503 MHz**
Antenna Type **TLP-8F/VP OS**
Gain **4.07 (6.09dB)**
Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.352	36	0.068	72	0.003	108	0.000	144	0.003	180	0.062	216	0.307	252	0.760	288	0.998
1	0.339	37	0.064	73	0.003	109	0.000	145	0.003	181	0.065	217	0.319	253	0.771	289	0.998
2	0.327	38	0.059	74	0.003	110	0.000	146	0.003	182	0.069	218	0.331	254	0.782	290	1.000
3	0.315	39	0.054	75	0.003	111	0.000	147	0.003	183	0.073	219	0.343	255	0.793	291	0.998
4	0.302	40	0.050	76	0.003	112	0.000	148	0.003	184	0.076	220	0.356	256	0.804	292	0.996
5	0.290	41	0.046	77	0.003	113	0.000	149	0.003	185	0.080	221	0.368	257	0.814	293	0.994
6	0.279	42	0.042	78	0.003	114	0.000	150	0.003	186	0.084	222	0.381	258	0.825	294	0.993
7	0.268	43	0.038	79	0.003	115	0.000	151	0.003	187	0.089	223	0.393	259	0.835	295	0.991
8	0.257	44	0.035	80	0.003	116	0.000	152	0.004	188	0.093	224	0.406	260	0.845	296	0.990
9	0.246	45	0.032	81	0.003	117	0.000	153	0.004	189	0.097	225	0.419	261	0.854	297	0.988
10	0.236	46	0.029	82	0.003	118	0.001	154	0.004	190	0.102	226	0.432	262	0.864	298	0.987
11	0.226	47	0.026	83	0.003	119	0.001	155	0.005	191	0.106	227	0.445	263	0.873	299	0.985
12	0.217	48	0.023	84	0.003	120	0.001	156	0.006	192	0.111	228	0.458	264	0.882	300	0.983
13	0.208	49	0.021	85	0.003	121	0.001	157	0.006	193	0.116	229	0.471	265	0.891	301	0.980
14	0.200	50	0.019	86	0.002	122	0.001	158	0.007	194	0.122	230	0.485	266	0.899	302	0.978
15	0.192	51	0.017	87	0.002	123	0.001	159	0.008	195	0.127	231	0.498	267	0.908	303	0.975
16	0.184	52	0.015	88	0.002	124	0.002	160	0.010	196	0.133	232	0.511	268	0.916	304	0.971
17	0.177	53	0.013	89	0.002	125	0.002	161	0.011	197	0.139	233	0.524	269	0.924	305	0.967
18	0.170	54	0.012	90	0.002	126	0.002	162	0.013	198	0.145	234	0.537	270	0.931	306	0.963
19	0.164	55	0.011	91	0.002	127	0.002	163	0.014	199	0.152	235	0.550	271	0.939	307	0.957
20	0.157	56	0.010	92	0.002	128	0.002	164	0.016	200	0.158	236	0.563	272	0.946	308	0.951
21	0.151	57	0.009	93	0.002	129	0.002	165	0.018	201	0.165	237	0.576	273	0.953	309	0.945
22	0.145	58	0.008	94	0.002	130	0.002	166	0.020	202	0.172	238	0.589	274	0.959	310	0.938
23	0.139	59	0.007	95	0.002	131	0.002	167	0.023	203	0.180	239	0.602	275	0.965	311	0.930
24	0.134	60	0.006	96	0.001	132	0.003	168	0.025	204	0.188	240	0.615	276	0.970	312	0.923
25	0.128	61	0.006	97	0.001	133	0.003	169	0.028	205	0.196	241	0.628	277	0.975	313	0.914
26	0.122	62	0.005	98	0.001	134	0.003	170	0.031	206	0.205	242	0.640	278	0.980	314	0.905
27	0.117	63	0.005	99	0.001	135	0.003	171	0.033	207	0.214	243	0.653	279	0.984	315	0.896
28	0.111	64	0.005	100	0.001	136	0.003	172	0.036	208	0.223	244	0.665	280	0.987	316	0.887
29	0.106	65	0.004	101	0.001	137	0.003	173	0.039	209	0.233	245	0.678	281	0.990	317	0.877
30	0.100	66	0.004	102	0.001	138	0.003	174	0.042	210	0.242	246	0.690	282	0.992	318	0.867
31	0.094	67	0.004	103	0.000	139	0.003	175	0.045	211	0.252	247	0.702	283	0.993	319	0.856
32	0.089	68	0.004	104	0.000	140	0.003	176	0.049	212	0.263	248	0.714	284	0.995	320	0.846
33	0.084	69	0.004	105	0.000	141	0.003	177	0.052	213	0.274	249	0.726	285	0.996	321	0.835
34	0.079	70	0.004	106	0.000	142	0.003	178	0.055	214	0.285	250	0.737	286	0.997	322	0.824
35	0.073	71	0.003	107	0.000	143	0.003	179	0.058	215	0.296	251	0.749	287	0.997	323	0.813

Figure 1
Antenna Azimuthal Pattern
W19EX-D Gainesville, FL
Facility ID 182301
Ch. 19 15 kW Directional

prepared for
Gray Television Licensee, LLC

March, 2023



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 2
Coverage Contour Comparison
W19EX-D Gainesville, FL
Facility ID 182301
Ch. 19 15 kW Directional

prepared for
Gray Television Licensee, LLC

March, 2023

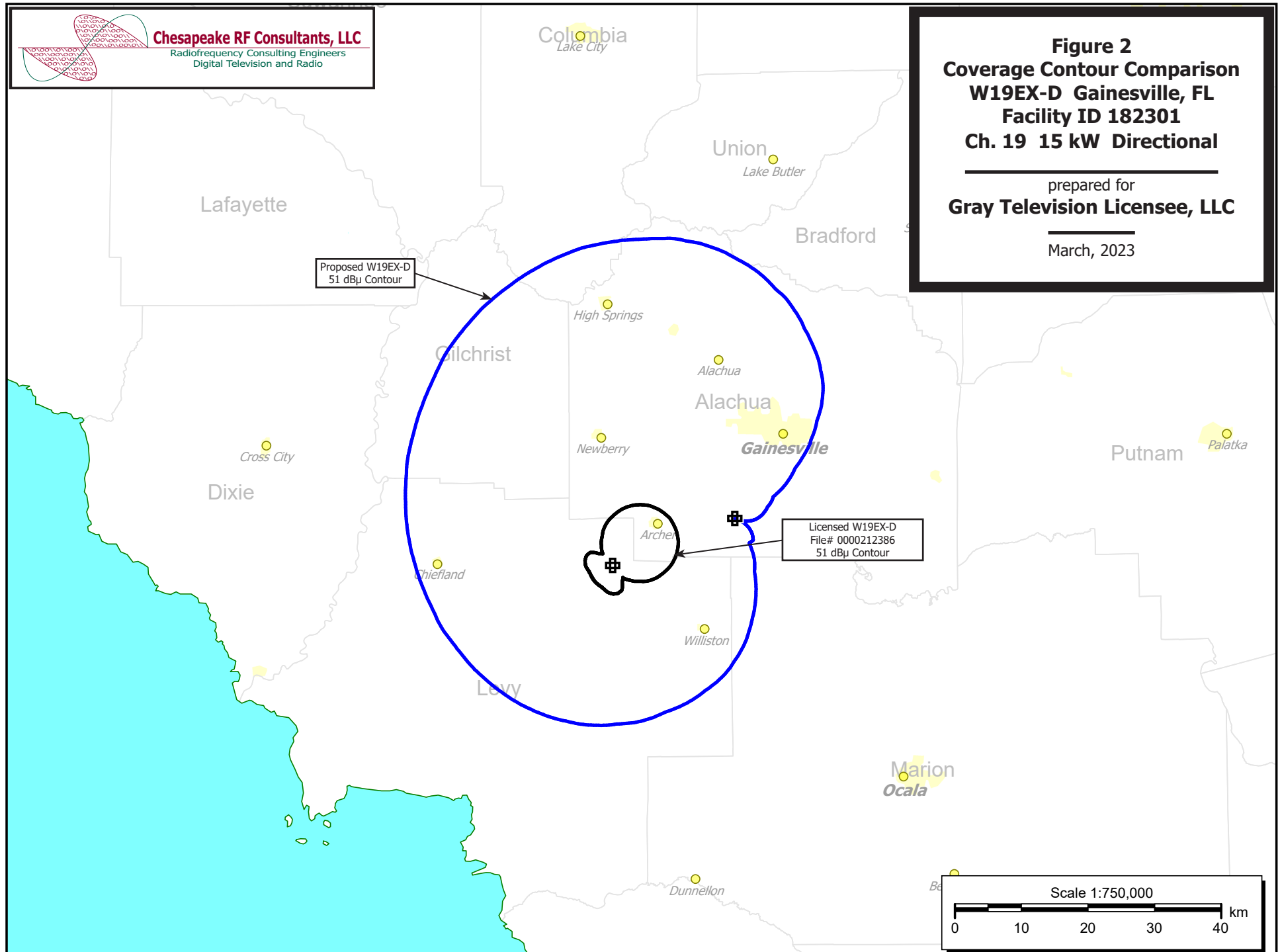


Table 1 W19EX-D TVStudy Analysis of Proposal (page 1 of 3)



tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: W19EX-D 1035360 680ft_TLP-8F-OS, Model: Longley-Rice
Start: 2023.03.29 14:49:42

Study created: 2023.03.29 14:49:42

Study build station data: LMS TV 2023-03-28

Proposal: W19EX-D D19 LD APP GAINESVILLE, FL
File number: W19EX-D 1035360 680ft TLP-8F-OS
Facility ID: 182301
Station data: User record
Record ID: 4932
Country: U.S.

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

Search options:
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WESH	D18	LD	LIC	DAYTONA BEACH, FL	BLANK0000121420	124.4 km
No	WJXT	D18	DT	LIC	JACKSONVILLE, FL	BLANK0000097950	115.6
No	WMOR-TV	D18	DT	LIC	LAKELAND, FL	BLANK0000125736	191.3
No	WQFT-LD	D18	LD	LIC	OCALA, FL	BLANK0000203079	83.6
No	WIYC	D19	DT	LIC	TROY, AL	BLANK0000120197	439.9
Yes	WESH	D19	LD	LIC	DAYTONA BEACH, FL	BLANK0000074849	41.7
Yes	WJAX-TV	D19	DT	LIC	JACKSONVILLE, FL	BLCDT20030328ANV	115.0
No	W32DJ-D	D19	LD	CP	MELBOURNE, FL	BLANK0000150182	226.9
No	WFTV	D19	LD	LIC	ORLANDO, FL	BLANK0000108207	150.0
No	WIDM-LD	D19	LD	LIC	PANAMA CITY, FL	BLANK0000013986	333.4
No	WIDM-LD	D19	LD	CP	PANAMA CITY, FL	BLANK0000163182	306.9
Yes	WTOG	D19	DT	LIC	ST. PETERSBURG, FL	BLANK0000151372	188.2
No	WMMF-LD	D19+	LD	LIC	VERO BEACH, FL	BLANK0000156792	275.6
No	WMMF-LD	N19+	TX	LIC	VERO BEACH, FL	BLTTL20070912ABV	290.9
No	WBWP-LD	D19	LD	LIC	WEST PALM BEACH, FL	BLANK0000125854	380.0
No	WBWP-LD	D19	LD	CP	WEST PALM BEACH, FL	BLANK0000189611	380.0
Yes	WTLH	D19	DT	LIC	BAINBRIDGE, GA	BLANK0000119592	197.6
No	W19DN-D	D19	LD	LIC	MACON, GA	BLANK0000179078	373.8
No	DWLOW-LP	N19-	TX	APP	BEAUFORT, SC	BLTT20000302AAU	355.5
No	WCSC-TV	D19	DT	LIC	CHARLESTON, SC	BLANK0000184937	455.7
No	WCWJ	D20	DT	LIC	JACKSONVILLE, FL	BLANK0000097952	115.6
No	W20ET-D	D20	LD	CP	MADISON, FL	BNPDTL20090825AHV	148.5
No	WZXZ-CD	D20	DC	LIC	ORLANDO, ETC., FL	BLANK0000108580	165.9
No	W20ES-D	D20	LD	APP	REDDICK, FL	BLANK0000202963	42.8
No	W20ES-D	D20	LD	CP	REDDICK, FL	BNPDTL20090825AKM	27.4
No	WVEA-TV	D20	DT	LIC	TAMPA, FL	BLANK0000099184	188.2
No	WCTV	D20	DT	LIC	THOMASVILLE, GA	BLANK0000121784	194.5
No	DW23AQ	N23-	TX	APP	LAKE CITY, FL	BLTT19931215JE	77.5
No	WWRJ-LD	N27-	TX	LIC	JACKSONVILLE, FL	BLTTL20140115AAF	111.1
No	W OCD-LD	N27-	TX	LIC	OCALA, FL	BLTTL20090331AEX	53.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D19
Mask: Full Service
Latitude: 29 32 12.00 N (NAD83)
Longitude: 82 23 59.00 W
Height AMSL: 226.8 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: TLP-8F-OS AZ W19EX-D C-80023 290.0 deg
Elec Pattn: Generic
Elec Tilt: 1.00

49.3 dBu contour:

Table 1 W19EX-D TVStudy Analysis of Proposal
(page 2 of 3)



Azimuth	ERP	HAAT	Distance
0.0 deg	1.86 kW	200.3 m	41.1 km
45.0	0.018	204.2	17.6
90.0	0.000	203.9	3.7
135.0	0.000	194.7	4.2
180.0	0.058	201.6	23.3
225.0	2.65	206.0	43.3
270.0	13.0	204.6	51.4
315.0	11.9	202.2	50.8

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 202 m

Distance to Canadian border: 1349.4 km

Distance to Mexican border: 1481.3 km

Conditions at FCC monitoring station: Vero Beach FL
Bearing: 140.8 degrees Distance: 275.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 305.7 degrees Distance: 2381.5 km

No land mobile station failures found

Study cell size: 1.00 km
Profile point spacing: 0.10 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to BLANK0000074849 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WESH	D19	LD	LIC	DAYTONA BEACH, FL	BLANK0000074849	
Undesireds:	W19EX-D	D19	LD	APP	GAINESVILLE, FL	W19EX-D 1035360 680ft	41.7 km
	WJAX-TV	D19	DT	LIC	JACKSONVILLE, FL	BLCDT20030328ANV	129.7
	WFTV	D19	LD	LIC	ORLANDO, FL	BLANK0000108207	113.4
	WTOG	D19	DT	LIC	ST. PETERSBURG, FL	BLANK0000151372	154.0
	WMMF-LD	D19+	LD	LIC	VERO BEACH, FL	BLANK0000156792	234.5
	WBWP-LD	D19	LD	LIC	WEST PALM BEACH, FL	BLANK0000125854	338.3
	WTLH	D19	DT	LIC	BAINBRIDGE, GA	BLANK0000119592	238.2
	W20ES-D	D20	LD	APP	REDDICK, FL	BLANK0000202963	3.2

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	3908.0	330,675	3908.0	330,675	3858.5	330,403	2.23 0.30
Undesired			Total IX	Unique IX, before		Unique IX, after	
W19EX-D D19 LD APP			85.9	990		85.9	990
WJAX-TV D19 DT LIC			41.4	57		36.4	0
WFTV D19 LD LIC			1.0	0		0.0	0
WTOG D19 DT LIC			11.1	216		8.1	215
WTLH D19 DT LIC			1.0	56		0.0	0

Interference to BLCDT20030328ANV LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WJAX-TV	D19	DT	LIC	JACKSONVILLE, FL	BLCDT20030328ANV	
Undesireds:	W19EX-D	D19	LD	APP	GAINESVILLE, FL	W19EX-D 1035360 680ft	115.0 km
	WTOG	D19	DT	LIC	ST. PETERSBURG, FL	BLANK0000151372	278.7
	WTLH	D19	DT	LIC	BAINBRIDGE, GA	BLANK0000119592	234.4
	WCWJ	D20	DT	LIC	JACKSONVILLE, FL	BLANK0000097952	1.8

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	27351.0	1,630,624	27348.0	1,630,579	26819.2	1,625,179	1.32 0.48

Table 1 W19EX-D TVStudy Analysis of Proposal
(page 3 of 3)

Undesired		Total IX	Unique IX, before	Unique IX, after
W19EX-D D19 LD APP	562.7	10,077		354.8 7,732
WTOG D19 DT LIC	121.9	2,969	79.7 2,616	76.7 2,601
WTLH D19 DT LIC	445.0	2,731	388.7 2,373	233.0 353
WCWJ D20 DT LIC	20.1	58	2.0 53	1.0 53

Interference to BLANK0000151372 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTOG	D19	DT	LIC	ST. PETERSBURG, FL	BLANK0000151372	
Undesireds:	W19EX-D	D19	LD	APP	GAINESVILLE, FL	W19EX-D 1035360 680ft	188.2 km
	WMOR-TV	D18	DT	LIC	LAKELAND, FL	BLANK0000125736	3.1
	WJAX-TV	D19	DT	LIC	JACKSONVILLE, FL	BLCDT20030328ANV	278.7
	WTLH	D19	DT	LIC	BAINBRIDGE, GA	BLANK0000119592	355.8
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
38464.0	5,258,544	38443.1	5,257,479	37998.2	5,152,653	37998.2 5,152,653	0.00 0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
W19EX-D D19 LD APP	1.0	0		0.0 0
WMOR-TV D18 DT LIC	2.0	58	2.0 58	2.0 58
WJAX-TV D19 DT LIC	436.9	104,312	427.7 103,298	426.7 103,298
WTLH D19 DT LIC	15.2	1,470	6.1 456	6.1 456

Interference to BLANK0000119592 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTLH	D19	DT	LIC	BAINBRIDGE, GA	BLANK0000119592	
Undesireds:	W19EX-D	D19	LD	APP	GAINESVILLE, FL	W19EX-D 1035360 680ft	197.6 km
	WIYC	D19	DT	LIC	TROY, AL	BLANK0000120197	242.4
	WJAX-TV	D19	DT	LIC	JACKSONVILLE, FL	BLCDT20030328ANV	234.4
	WTOG	D19	DT	LIC	ST. PETERSBURG, FL	BLANK0000151372	355.8
	WANF	D19	DT	LIC	ATLANTA, GA	BLANK0000205000	349.2
	WCTV	D20	DT	LIC	THOMASVILLE, GA	BLANK0000121784	3.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
44327.8	1,066,957	44306.8	1,066,894	44178.1	1,066,319	44089.8 1,065,466	0.20 0.08

Undesired		Total IX	Unique IX, before	Unique IX, after
W19EX-D D19 LD APP	104.4	973		88.3 853
WIYC D19 DT LIC	15.0	57	11.0 57	11.0 57
WJAX-TV D19 DT LIC	66.1	193	63.1 191	48.1 71
WTOG D19 DT LIC	1.0	0	0.0 0	0.0 0
WANF D19 DT LIC	27.3	108	21.3 106	21.3 106
WCTV D20 DT LIC	26.2	219	26.2 219	26.2 219

Interference to proposal scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W19EX-D	D19	LD	APP	GAINESVILLE, FL	W19EX-D 1035360 680ft	
Undesireds:	WESH	D19	LD	LIC	DAYTONA BEACH, FL	BLANK0000074849	41.7 km
	WJAX-TV	D19	DT	LIC	JACKSONVILLE, FL	BLCDT20030328ANV	115.0
	WIDM-LD	D19	LD	LIC	PANAMA CITY, FL	BLANK0000013986	333.4
	WTOG	D19	DT	LIC	ST. PETERSBURG, FL	BLANK0000151372	188.2
	WMMF-LD	D19+	LD	LIC	VERO BEACH, FL	BLANK0000156792	275.6
	WTLH	D19	DT	LIC	BAINBRIDGE, GA	BLANK0000119592	197.6
	W20ES-D	D20	LD	APP	REDDICK, FL	BLANK0000202963	42.8
Service area		Terrain-limited		IX-free		Percent IX	
3777.8	278,823	3775.8	278,823	3610.6	274,092	4.38 1.70	

Undesired		Total IX	Unique IX	Prcnt Unique IX
WESH D19 LD LIC	72.7	2,454	643	1.39 0.23
WJAX-TV D19 DT LIC	101.6	4,088	2,126	1.94 0.76
WTOG D19 DT LIC	21.1	151	0	0.19 0.00
WTLH D19 DT LIC	9.1	0	0	0.03 0.00

**Channel and
Facility
Information**

Section	Question	Response
Facility ID	182301	
State	Florida	
City	GAINESVILLE	
LPD Channel	19	

Antenna Location
Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1035360
Coordinates (NAD83)	Latitude	29° 32' 12.0" N+
	Longitude	082° 23' 59.0" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	299.5 meters
	Support Structure Height	281.7 meters
	Ground Elevation (AMSL)	19.5 meters
Antenna Data	Height of Radiation Center Above Ground Level	207.3 meters
	Height of Radiation Center Above Mean Sea Level	226.8 meters
	Effective Radiated Power	15 kW

Antenna
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	No
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	Dielectric
	Model	TLP-8F/VP OS
	Rotation	290 degrees
	Electrical Beam Tilt	1.0
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
Elevation Radiation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	
	Out-of-Channel Emission Mask:	Full Service

Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	Value	Degree	Value	Degree	Value	Degree	Value
0	1.000	90	0.157	180	0.001	270	0.158
10	0.983	100	0.100	190	0.001	280	0.242
20	0.938	110	0.050	200	0.002	290	0.356
30	0.846	120	0.019	210	0.003	300	0.485
40	0.732	130	0.006	220	0.003	310	0.615
50	0.609	140	0.004	230	0.010	320	0.737
60	0.481	150	0.003	240	0.031	330	0.845
70	0.352	160	0.002	250	0.062	340	0.931
80	0.236	170	0.001	260	0.102	350	0.987

Additional Azimuths

Degree	V _A
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