

**TECHNICAL STATEMENT  
RE: AMENDMENT TO PENDING MAJOR  
CHANGE APPLICATION – FILE NO. 000029983  
WPAN 620 KW-DA 374.1 M HAAT CH. 21  
FORT WALTON BEACH, FLORIDA  
B&C COMMUNICATIONS, LLC**

**INTRODUCTION**

B&C Communications, LLC (“B&C”), the licensee of digital television station WPAN, Facility ID No. 31570, timely filed a major modification application in the *First Priority Window* to change WPAN’s post-auction channel assignment from Channel 31 to Channel 21.<sup>1</sup> WPAN was originally assigned Channel 31 in the *Closing and Channel Reassignment Public Notice*,<sup>2</sup> but was only able to obtain a construction permit in the initial 90-day filing window for a reduced facility that is predicted to have a service population loss of more than one percent.<sup>3</sup> For this reason, B&C filed the aforementioned major change application to request an alternate channel for WPAN. B&C now seeks to amend its *First Priority Window* filing to specify a new antenna location for post-auction operation on Channel 21.

**CHANGES TO THE PENDING MAJOR MODIFICATION**

As indicated above, B&C is amending the major change application that is currently on-file for WPAN to propose, among other things, a different antenna location. There is an existing FCC registered tower located at the new site, which has adequate space available to accommodate WPAN’s directional antenna. The antenna to be employed is a horizontally polarized Dielectric Model TFU-24DSC 3BP300 and a copy of the directional azimuth pattern is attached as Figure 1. The new antenna radiation center height will be positioned at 406.6 meters above mean sea level (AMSL), which results in a calculated height above average terrain (HAAT) of 374.1 meters. WPAN will operate with a maximum effective radiated power (ERP) of 620 kW, which is well below the maximum allowable ERP of 970 kW determined from the table in 47 C.F.R §73.622(f)(8). A contour map demonstrating that the above technical

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<sup>1</sup> FCC File No. 0000029983, Major Modification of Construction Permit. WPAN’s eligibility to file in the *First Priority Window* was established based on a service population loss of more than one percent. More specifically, it was determined that the total service population for the current Channel 31 construction permit (599,258) is 37,426 people less than the Channel 31 baseline parameters (636,684), which constituted a loss in service population of 5.9 percent. The total service population for the amended Channel 21 proposal is 1,115,655.

<sup>2</sup> *Incentive Auction Closing and Channel Reassignment Public Notice* (“CCRPN”), 32 FCC Rcd 2786 (2017).

<sup>3</sup> FCC File No. 0000028714, Minor Modification of License



changes will not extend WPAN's protected contour beyond that previously proposed in the *First Priority Window* is provided in Figure 2.<sup>4</sup>

The aforementioned antenna height of 406.6 meters AMSL was determined based on the registered site elevation of 41.0 meters and the proposed height of 365.6 meters for the antenna radiation center above ground level (AGL). With regard to interference protection compliance, the *TVStudy* analysis summary attached as Figure 3 indicates that no interference check failures were found. Therefore, the proposal is not predicted to cause new interference beyond 0.5 percent to the technical parameters of any other post-auction station.<sup>5</sup>

The contour map attached as Figure 4 demonstrates that the proposed facility will provide a 48 dBu signal over the entire community of Fort Walton Beach, FL as required in 47 C.F.R §73.625.

## ENVIRONMENTAL IMPACT

This application specifies an existing FCC registered tower that was constructed before March 16, 2001.<sup>6</sup> Given that the collocation of WPAN's antenna will not result in a substantial increase in the size of the existing antenna-supporting structure,<sup>7</sup> the criteria outlined in 47 CFR § 1.1307(a) for certain types of facilities that may significantly affect the environment do not apply. With regard to the rules for limiting human exposure to radio-frequency (RF) energy in

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<sup>4</sup> Figure 2 demonstrates that the protected 39.5 dBu contour specified in FCC File No. 0000029983 will not be extended in any direction over land.

<sup>5</sup> *TVStudy* Program, Version 2.2.5.

<sup>6</sup> 47 CFR Part 1, App. B, § III.A. "An antenna may be mounted on an existing tower constructed on or before March 16, 2001 without such collocation being reviewed through the Section 106 process set forth in the NPA, unless: 1. The mounting of the antenna will result in a substantial increase in the size of the tower as defined in Stipulation I.E, above; or, 2. The tower has been determined by the FCC to have an adverse effect on one or more historic properties, where such effect has not been avoided or mitigated through a conditional no adverse effect determination, a Memorandum of Agreement, a programmatic agreement, or a finding of compliance with Section 106 and the NPA; or, 3. The tower is the subject of a pending environmental review or related proceeding before the FCC involving compliance with Section 106 of the National Historic Preservation Act; or, 4. The collocation licensee or the owner of the tower has received written or electronic notification that the FCC is in receipt of a complaint from a member of the public, an Indian Tribe, a SHPO or the Council, that the collocation has an adverse effect on one or more historic properties."

<sup>7</sup> 47 CFR Part 1, App. B, § I.C. A substantial increase in size means: "(1) The mounting of the proposed antenna on the tower would increase the existing height of the tower by more than 10%, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to avoid interference with existing antennas; or (2) The mounting of the proposed antenna would involve the installation of more than the standard number of new equipment cabinets for the technology involved, not to exceed four, or more than one new equipment shelter; or (3) The mounting of the proposed antenna would involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable; or (4) The mounting of the proposed antenna would involve excavation outside the current tower site, defined as the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site."



47 CFR § 1.1307(b), this application seeks authority to operate a television broadcast antenna in full compliance with those guidelines as described in more detail below. The following technical specifications are proposed:

Frequency :	512 - 518 MHz (UHF Channel 21)
Effective Radiated Power:	620 kW(H)
Antenna Type:	DIE TFU-24DSC 3BP300
Antenna Polarization:	Horizontal
Antenna Height:	365.6 meters AGL
Location coordinates:	30-42-21.0 N, 87-24-12.0 W (NAD83)
Site elevation:	41.0 meters AMSL
Overall tower height:	431 meters AGL
FCC ASRN:	1054512

Using the methodology for predicting power density levels for television broadcast antennas outlined in *FCC OET Bulletin No. 65, Edition 97-01, (OET-65)*, the proposed facility is calculated to produce a maximum power density of  $1.57 \mu\text{W}/\text{cm}^2$  at points 2 meters above ground (approximate human head height). This exposure level was determined using 10 percent antenna relative field, which is considered to be a typical value for UHF antennas. The maximum exposure limits applicable to Channel 21, as determined in accordance with 47 CFR § 1.1310 for uncontrolled and controlled situations, are  $341 \mu\text{W}/\text{cm}^2$  and  $1,707 \mu\text{W}/\text{cm}^2$  respectively. Because the worst-case exposure level determined for the proposed facility is not more than 5% of those guidelines and considering that suitable warning signs will be posted, no further showing of compliance is necessary.

Respectfully submitted,

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Ph. 301-776-4488

April 5, 2017

#### Attachments

Figure 1 – Directional Antenna Pattern  
Figure 2 – No Extension of Window Filing  
Figure 3 – *TVStudy* Results Summary  
Figure 4 – Predicted Service Contours

## Horizontal Polarization AZIMUTH PATTERN

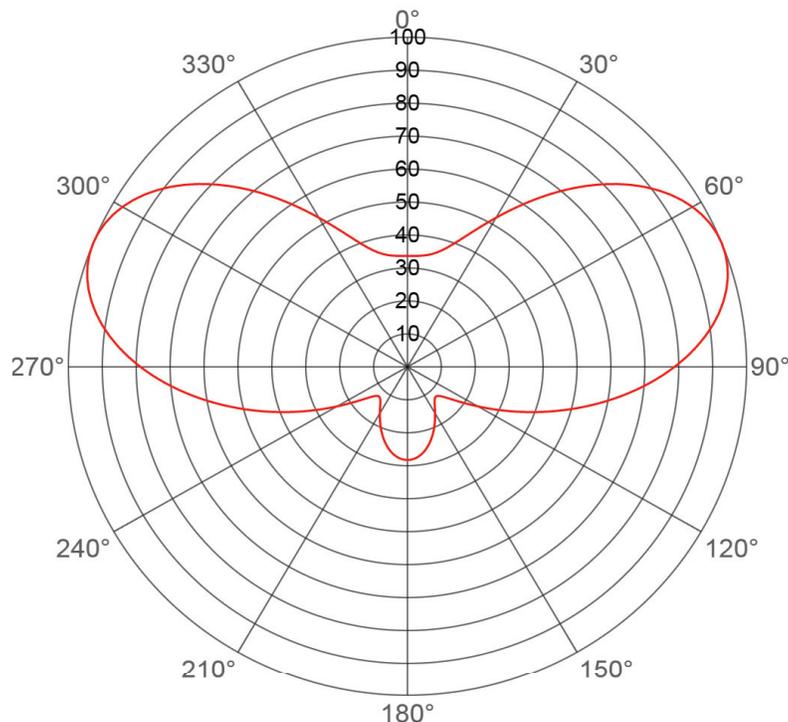


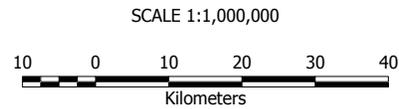
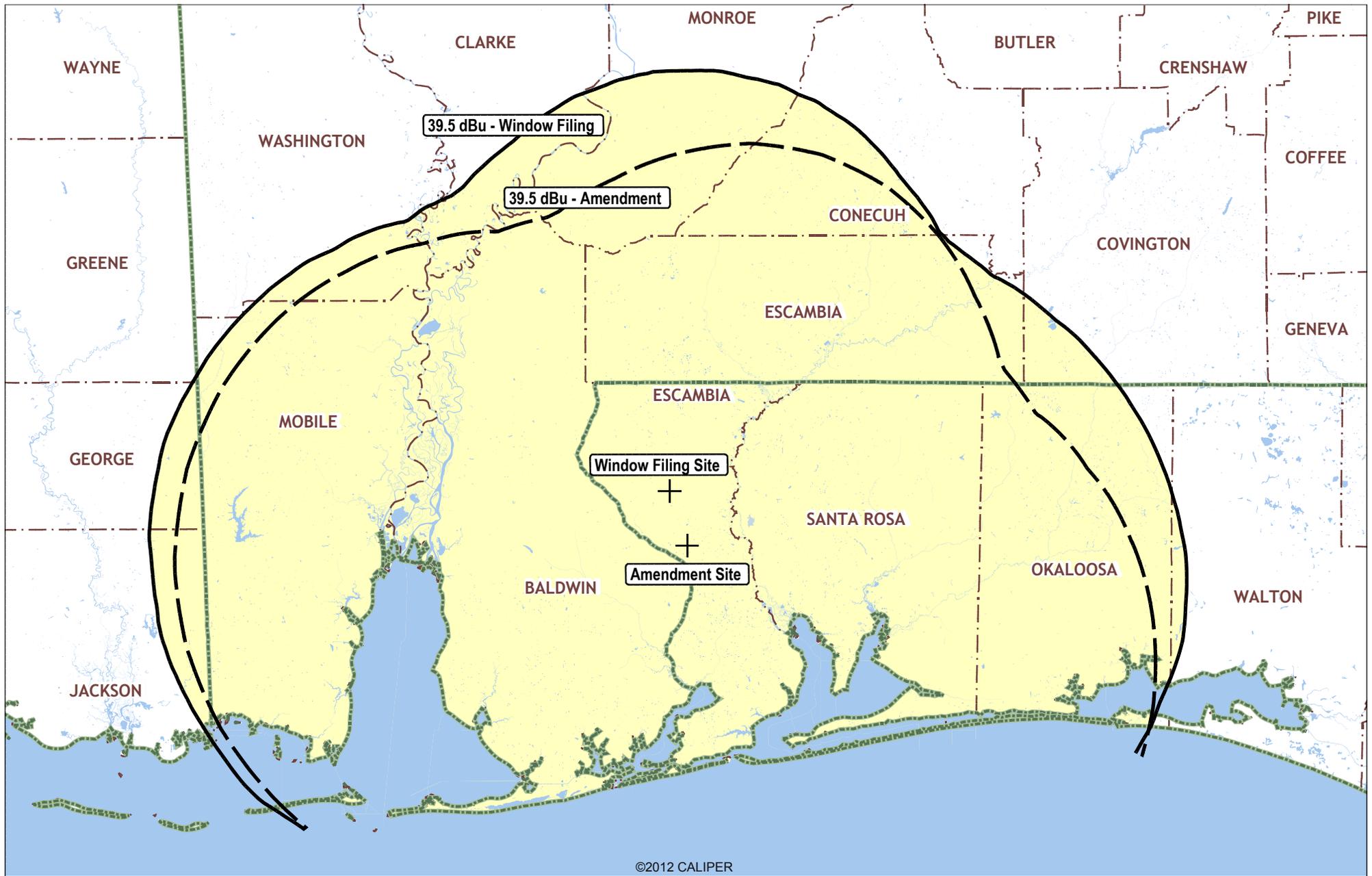
Exhibit No. **Figure 1**  
 Date **4 Apr 2018**  
 Call Letters **WPAN**  
 Channel **21**  
 Antenna Type **TFU-24GTH 3BP300**  
 Location **Fort Walton Beach, FL**  
 Customer **B&C Communications**

Gain **3.0 (4.77 dB)**  
**Calculated**  
 Drawing # **TFU-3BP300**

Note: azimuth pattern plot and data are without rotation

Deg	Value																		
0	0.336	36	0.623	72	0.992	108	0.439	144	0.136	180	0.283	216	0.136	252	0.439	288	0.992	324	0.623
1	0.337	37	0.641	73	0.987	109	0.420	145	0.140	181	0.282	217	0.133	253	0.458	289	0.995	325	0.606
2	0.337	38	0.658	74	0.983	110	0.401	146	0.144	182	0.282	218	0.130	254	0.477	290	0.998	326	0.588
3	0.337	39	0.676	75	0.976	111	0.383	147	0.148	183	0.281	219	0.128	255	0.497	291	0.999	327	0.571
4	0.337	40	0.694	76	0.969	112	0.365	148	0.153	184	0.280	220	0.125	256	0.517	292	1.000	328	0.554
5	0.338	41	0.712	77	0.961	113	0.348	149	0.158	185	0.278	221	0.124	257	0.537	293	0.999	329	0.538
6	0.339	42	0.729	78	0.953	114	0.331	150	0.163	186	0.276	222	0.123	258	0.557	294	0.998	330	0.522
7	0.340	43	0.746	79	0.943	115	0.314	151	0.168	187	0.274	223	0.123	259	0.577	295	0.995	331	0.507
8	0.341	44	0.764	80	0.932	116	0.298	152	0.173	188	0.271	224	0.123	260	0.597	296	0.993	332	0.492
9	0.343	45	0.780	81	0.921	117	0.283	153	0.179	189	0.268	225	0.125	261	0.617	297	0.988	333	0.478
10	0.345	46	0.797	82	0.909	118	0.268	154	0.184	190	0.265	226	0.127	262	0.637	298	0.983	334	0.464
11	0.347	47	0.813	83	0.896	119	0.254	155	0.190	191	0.261	227	0.130	263	0.657	299	0.977	335	0.451
12	0.350	48	0.829	84	0.883	120	0.240	156	0.196	192	0.257	228	0.133	264	0.676	300	0.971	336	0.438
13	0.354	49	0.844	85	0.868	121	0.227	157	0.201	193	0.253	229	0.138	265	0.696	301	0.962	337	0.427
14	0.358	50	0.859	86	0.853	122	0.215	158	0.207	194	0.248	230	0.143	266	0.715	302	0.954	338	0.416
15	0.363	51	0.873	87	0.838	123	0.203	159	0.212	195	0.244	231	0.149	267	0.733	303	0.945	339	0.406
16	0.368	52	0.887	88	0.822	124	0.192	160	0.218	196	0.239	232	0.156	268	0.752	304	0.935	340	0.397
17	0.374	53	0.900	89	0.805	125	0.182	161	0.223	197	0.234	233	0.164	269	0.770	305	0.924	341	0.389
18	0.381	54	0.912	90	0.788	126	0.172	162	0.229	198	0.229	234	0.172	270	0.788	306	0.912	342	0.381
19	0.389	55	0.924	91	0.770	127	0.164	163	0.234	199	0.223	235	0.182	271	0.805	307	0.900	343	0.374
20	0.397	56	0.935	92	0.752	128	0.156	164	0.239	200	0.218	236	0.192	272	0.822	308	0.887	344	0.368
21	0.406	57	0.945	93	0.733	129	0.149	165	0.244	201	0.212	237	0.203	273	0.838	309	0.873	345	0.363
22	0.416	58	0.954	94	0.715	130	0.143	166	0.248	202	0.207	238	0.215	274	0.853	310	0.859	346	0.358
23	0.427	59	0.962	95	0.696	131	0.138	167	0.253	203	0.201	239	0.227	275	0.868	311	0.844	347	0.354
24	0.438	60	0.971	96	0.676	132	0.133	168	0.257	204	0.196	240	0.240	276	0.883	312	0.829	348	0.350
25	0.451	61	0.977	97	0.657	133	0.130	169	0.261	205	0.190	241	0.254	277	0.896	313	0.813	349	0.347
26	0.464	62	0.983	98	0.637	134	0.127	170	0.265	206	0.184	242	0.268	278	0.909	314	0.797	350	0.345
27	0.478	63	0.988	99	0.617	135	0.125	171	0.268	207	0.179	243	0.283	279	0.921	315	0.780	351	0.343
28	0.492	64	0.993	100	0.597	136	0.123	172	0.271	208	0.173	244	0.298	280	0.932	316	0.764	352	0.341
29	0.507	65	0.995	101	0.577	137	0.123	173	0.274	209	0.168	245	0.314	281	0.943	317	0.746	353	0.340
30	0.522	66	0.998	102	0.557	138	0.123	174	0.276	210	0.163	246	0.331	282	0.953	318	0.729	354	0.339
31	0.538	67	0.999	103	0.537	139	0.124	175	0.278	211	0.158	247	0.348	283	0.961	319	0.712	355	0.338
32	0.554	68	1.000	104	0.517	140	0.125	176	0.280	212	0.153	248	0.365	284	0.969	320	0.694	356	0.337
33	0.571	69	0.999	105	0.497	141	0.128	177	0.281	213	0.148	249	0.383	285	0.976	321	0.676	357	0.337
34	0.588	70	0.998	106	0.477	142	0.130	178	0.282	214	0.144	250	0.401	286	0.983	322	0.658	358	0.337
35	0.606	71	0.995	107	0.458	143	0.133	179	0.282	215	0.140	251	0.420	287	0.987	323	0.641	359	0.337

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**FIGURE 2**  
**NO EXTENSION OF WINDOW FILING**  
**Proposed 620 kW-DA 374.1m HAAT Ch. 21**  
**Fort Walton Beach, Florida**

## FIGURE 3 Analysis Summary TVSTUDY, VERSION 2.2.5.

Study created: 2018.04.05 15:35:19

Study build station data: LMS TV 2018-04-05

Proposal: WPAN D21 DT APP FORT WALTON BEACH, FL  
File number: WPAN21 iHeart Study 8 3BP300 0.75BT  
Facility ID: 31570  
Station data: User record  
Record ID: 101  
Country: U.S.  
Zone: III

Search options:  
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WKRG-TV	D20	DT	CP	MOBILE, AL	BLANK000027663	40.9 km
Yes	WKRG-TV	D20	DT	BL	MOBILE, AL	DTVBL73187	40.8
Yes	WDHN	D21	DT	LIC	DOTHAN, AL	BLCDT20090303ACR	208.0
Yes	WTT0	D21	DT	CP	HOMEW000029999	BLANK0000029999	313.9
Yes	WTT0	D21	DT	BL	HOMEW000029999	DTVBL74138	313.9
No	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	445.3
No	WBRL-CD	D21	DC	LIC	BATON ROUGE, LA	BLDTA20100908AAP	373.3
Yes	WHNO	D21	DT	LIC	NEW ORLEANS, LA	BLCDT20050413AAK	266.2
Yes	WAPT	D21	DT	LIC	JACKSON, MS	BLCDT20081126ALZ	325.0
No	WCOV-TV	D22	DT	CP	MONTGOMERY, AL	BLANK0000034411	183.8
No	WCOV-TV	D22	DT	BL	MONTGOMERY, AL	DTVBL73642	183.8
No	WDES-CD	D22	DC	CP	DESTIN, FL	BLANK0000027917	92.4
No	WDES-CD	D22	DC	BL	DESTIN, FL	DTVBL4353	92.4
No	WPFN-CD	D22	DC	LIC	PANAMA CITY, FL	BLDTA20141222AAC	166.3
No	WHLT	D22	DT	APP	HATTIESBURG, MS	BLANK0000002705	191.2
No	WHLT	D22	DT	LIC	HATTIESBURG, MS	BLCDT20091216AAL	191.1

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D21  
Latitude: 30 42 21.00 N (NAD83)  
Longitude: 87 24 12.00 W  
Height AMSL: 406.6 m  
HAAT: 374.1 m  
Peak ERP: 620 kW  
Antenna: DIE-TFU-24DSC 3BP300 (ID 1002064) 199.0 deg

Elev Pattn: Generic  
Elec Tilt: 0.75

39.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	30.7 kW	355.7 m	78.4 km
45.0	21.2	374.1	77.5
90.0	110	381.5	89.3
135.0	602	370.6	102.1
180.0	95.2	395.8	89.3
225.0	138	383.6	91.2
270.0	609	370.6	102.2
315.0	57.4	360.9	83.1

Distance to Canadian border: 1290.4 km

Distance to Mexican border: 1068.9 km

Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 35.0 degrees Distance: 431.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 307.9 degrees Distance: 1918.1 km

No land mobile station failures found

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%

---- Below is IX received by proposal WPAN21 iHeart Study 8 ----

Proposal receives 11.01% interference from scenario 1  
Proposal receives 11.01% interference from scenario 2  
Proposal receives 11.01% interference from scenario 3  
Proposal receives 11.01% interference from scenario 4  
Proposal receives 9.34% interference from scenario 5  
Proposal receives 9.34% interference from scenario 6  
Proposal receives 9.34% interference from scenario 7  
Proposal receives 9.34% interference from scenario 8  
No IX check failures found.

