

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY CHRISTIAN CENTER OF SANTA ANA, INC., licensee of digital television station WPGD-DT, Channel 33 in Hendersonville, Tennessee, in support of its Request for Special Temporary Authority (STA) to operate a temporary facility at the licensed WPGD-DT site while the licensed facility is repaired. The instant request involves mounting an emergency antenna on the same tower as the authorized WPGD-DT antenna is presently mounted and operating it with an effective radiated power of 175 kW.

It is proposed to operate with a Dielectric broadband directional antenna mounted at the 152-meter level of the existing 393-meter tower from which WPGD-DT presently operates. Elevation and azimuth pattern data for the proposed antenna are provided in Exhibit B. Exhibit C is a map upon which the predicted service contours of the STA facility are plotted. A map showing the STA service contour in relation to the licensed WPGD-DT service contour is provided in Exhibit D. As shown, the STA facility's predicted 41 dBu service contour is completely contained within that of the licensed WPGD-DT facility. As a result, and since this proposal is for a temporary facility, no interference study is provided herein. A power density calculation appears in Exhibit E.

It is not expected that the proposed facility would cause objectionable interference to any other broadcast or non-broadcast station operating at or near the WPGD-DT site.

EXHIBIT A

However, if such should occur, the owner of this station recognizes its obligation to take whatever corrective actions are necessary.

Since no change in overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1233975 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.

KEVIN T. FISHER

March 1, 2012



Proposal Number

Date

8-Oct-09

Call Letters

Channel **33**

Location

,

Customer

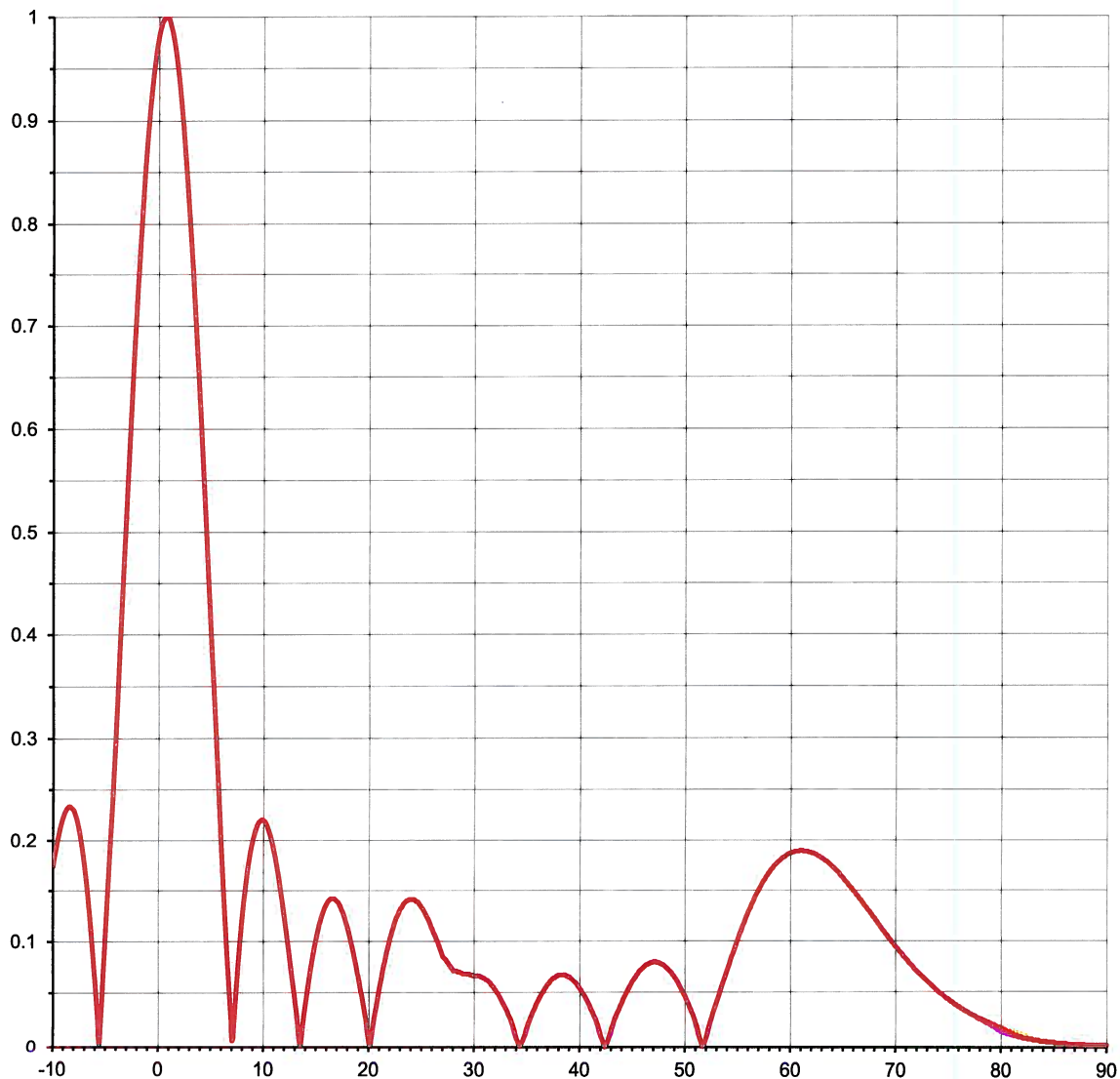
Antenna Type

TUP-C3-4-1

ELEVATION PATTERN

RMS Gain at Main Lobe **9.40 (9.73 dB)**
RMS Gain at Horizontal **9.00 (9.54 dB)**
Calculated / Measured **Calculated**

Beam Tilt **1.00 deg**
Frequency **587.00 MHz**
Drawing # **4U094100-90**



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EXHIBIT B-1

ANTENNA ELEVATION PATTERN

**PROPOSED WPGD-DT STA
CHANNEL 33 – HENDERSONVILLE, TENNESSEE**

SMITH AND FISHER

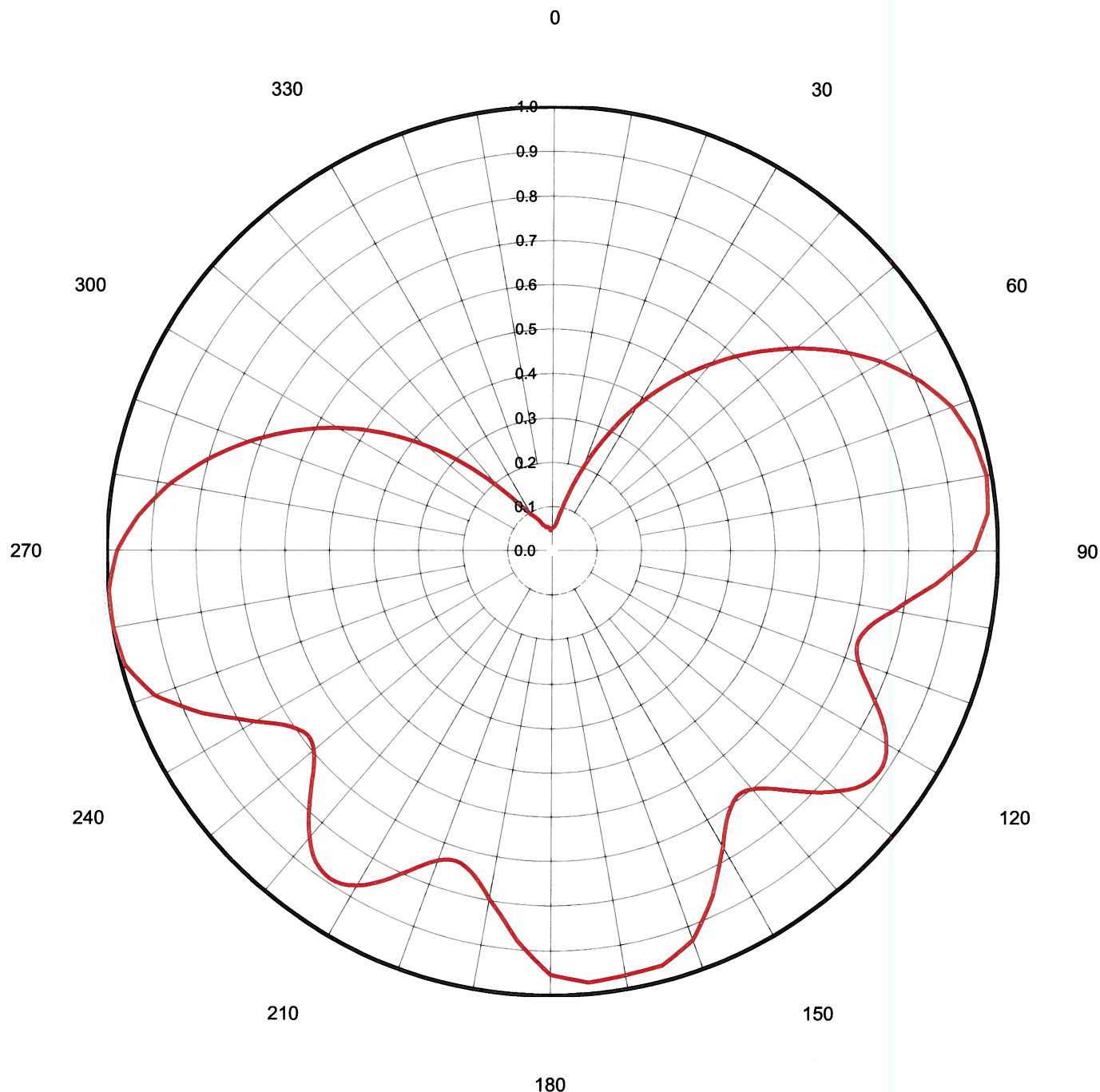
AZIMUTH PATTERN

Gain **1.87**
Calculated / Measured

(2.72 dB)
Calculated

Frequency
Drawing #

587.00 MHz
TUP-C3-0587





Proposal Number

Date

Call Letters

Location

Customer

Antenna Type

8-Oct-09

Channel

33

TUP-C3-4-1

TABULATION OF AZIMUTH PATTERNAzimuth Pattern Drawing #: **TUP-C3-0587**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.051	45	0.632	90	0.947	135	0.763	180	0.953	225	0.763	270	0.977	315	0.275
1	0.052	46	0.648	91	0.930	136	0.747	181	0.939	226	0.747	271	0.968	316	0.258
2	0.053	47	0.664	92	0.913	137	0.733	182	0.924	227	0.731	272	0.959	317	0.240
3	0.054	48	0.680	93	0.896	138	0.719	183	0.908	228	0.717	273	0.950	318	0.222
4	0.054	49	0.696	94	0.880	139	0.708	184	0.894	229	0.706	274	0.941	319	0.205
5	0.055	50	0.712	95	0.864	140	0.700	185	0.879	230	0.697	275	0.932	320	0.188
6	0.057	51	0.726	96	0.844	141	0.694	186	0.860	231	0.690	276	0.920	321	0.175
7	0.061	52	0.741	97	0.826	142	0.691	187	0.843	232	0.687	277	0.908	322	0.161
8	0.065	53	0.756	98	0.808	143	0.692	188	0.826	233	0.687	278	0.896	323	0.149
9	0.069	54	0.771	99	0.793	144	0.696	189	0.811	234	0.691	279	0.884	324	0.137
10	0.075	55	0.786	100	0.779	145	0.704	190	0.797	235	0.698	280	0.872	325	0.126
11	0.084	56	0.799	101	0.763	146	0.712	191	0.781	236	0.707	281	0.858	326	0.118
12	0.093	57	0.813	102	0.749	147	0.724	192	0.767	237	0.718	282	0.844	327	0.112
13	0.103	58	0.826	103	0.737	148	0.737	193	0.755	238	0.733	283	0.830	328	0.105
14	0.114	59	0.840	104	0.728	149	0.753	194	0.745	239	0.749	284	0.816	329	0.100
15	0.125	60	0.853	105	0.722	150	0.771	195	0.738	240	0.768	285	0.802	330	0.095
16	0.140	61	0.864	106	0.718	151	0.787	196	0.733	241	0.785	286	0.786	331	0.092
17	0.154	62	0.876	107	0.717	152	0.803	197	0.731	242	0.803	287	0.771	332	0.089
18	0.169	63	0.887	108	0.719	153	0.821	198	0.732	243	0.823	288	0.756	333	0.086
19	0.185	64	0.898	109	0.724	154	0.840	199	0.736	244	0.843	289	0.740	334	0.083
20	0.200	65	0.909	110	0.732	155	0.859	200	0.742	245	0.864	290	0.725	335	0.079
21	0.218	66	0.918	111	0.743	156	0.873	201	0.751	246	0.881	291	0.709	336	0.077
22	0.236	67	0.927	112	0.755	157	0.888	202	0.763	247	0.898	292	0.692	337	0.074
23	0.254	68	0.935	113	0.770	158	0.903	203	0.776	248	0.915	293	0.676	338	0.070
24	0.271	69	0.944	114	0.785	159	0.918	204	0.791	249	0.932	294	0.659	339	0.066
25	0.289	70	0.953	115	0.800	160	0.932	205	0.805	250	0.949	295	0.642	340	0.062
26	0.307	71	0.957	116	0.816	161	0.938	206	0.821	251	0.958	296	0.626	341	0.061
27	0.326	72	0.962	117	0.831	162	0.945	207	0.835	252	0.967	297	0.609	342	0.060
28	0.344	73	0.967	118	0.845	163	0.952	208	0.849	253	0.975	298	0.591	343	0.059
29	0.362	74	0.973	119	0.858	164	0.958	209	0.861	254	0.984	299	0.574	344	0.057
30	0.379	75	0.978	120	0.868	165	0.965	210	0.871	255	0.992	300	0.556	345	0.055
31	0.397	76	0.980	121	0.877	166	0.966	211	0.879	256	0.994	301	0.539	346	0.055
32	0.415	77	0.981	122	0.883	167	0.966	212	0.886	257	0.996	302	0.521	347	0.055
33	0.433	78	0.984	123	0.887	168	0.967	213	0.889	258	0.997	303	0.503	348	0.055
34	0.450	79	0.986	124	0.887	169	0.967	214	0.890	259	0.999	304	0.485	349	0.055
35	0.467	80	0.989	125	0.885	170	0.968	215	0.888	260	1.000	305	0.466	350	0.055
36	0.484	81	0.987	126	0.882	171	0.969	216	0.884	261	1.000	306	0.447	351	0.053
37	0.501	82	0.985	127	0.875	172	0.971	217	0.877	262	0.999	307	0.429	352	0.052
38	0.518	83	0.984	128	0.866	173	0.972	218	0.868	263	0.999	308	0.410	353	0.050
39	0.534	84	0.982	129	0.855	174	0.973	219	0.857	264	0.999	309	0.390	354	0.048
40	0.551	85	0.980	130	0.841	175	0.974	220	0.843	265	0.999	310	0.371	355	0.046
41	0.567	86	0.973	131	0.827	176	0.969	221	0.829	266	0.994	311	0.352	356	0.047
42	0.583	87	0.966	132	0.812	177	0.965	222	0.814	267	0.990	312	0.333	357	0.048
43	0.600	88	0.959	133	0.796	178	0.961	223	0.797	268	0.986	313	0.314	358	0.049
44	0.616	89	0.953	134	0.780	179	0.957	224	0.780	269	0.981	314	0.295	359	0.050

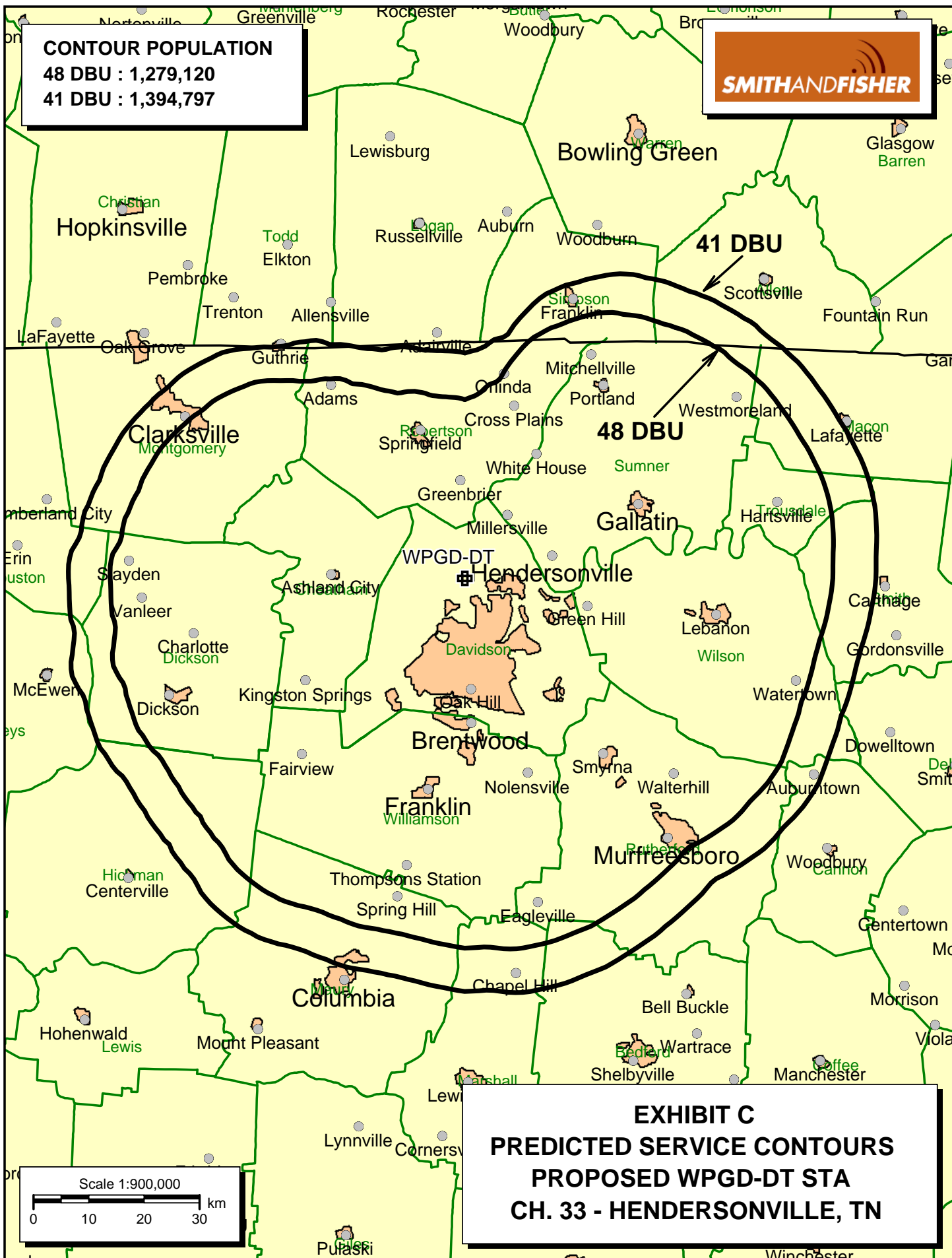
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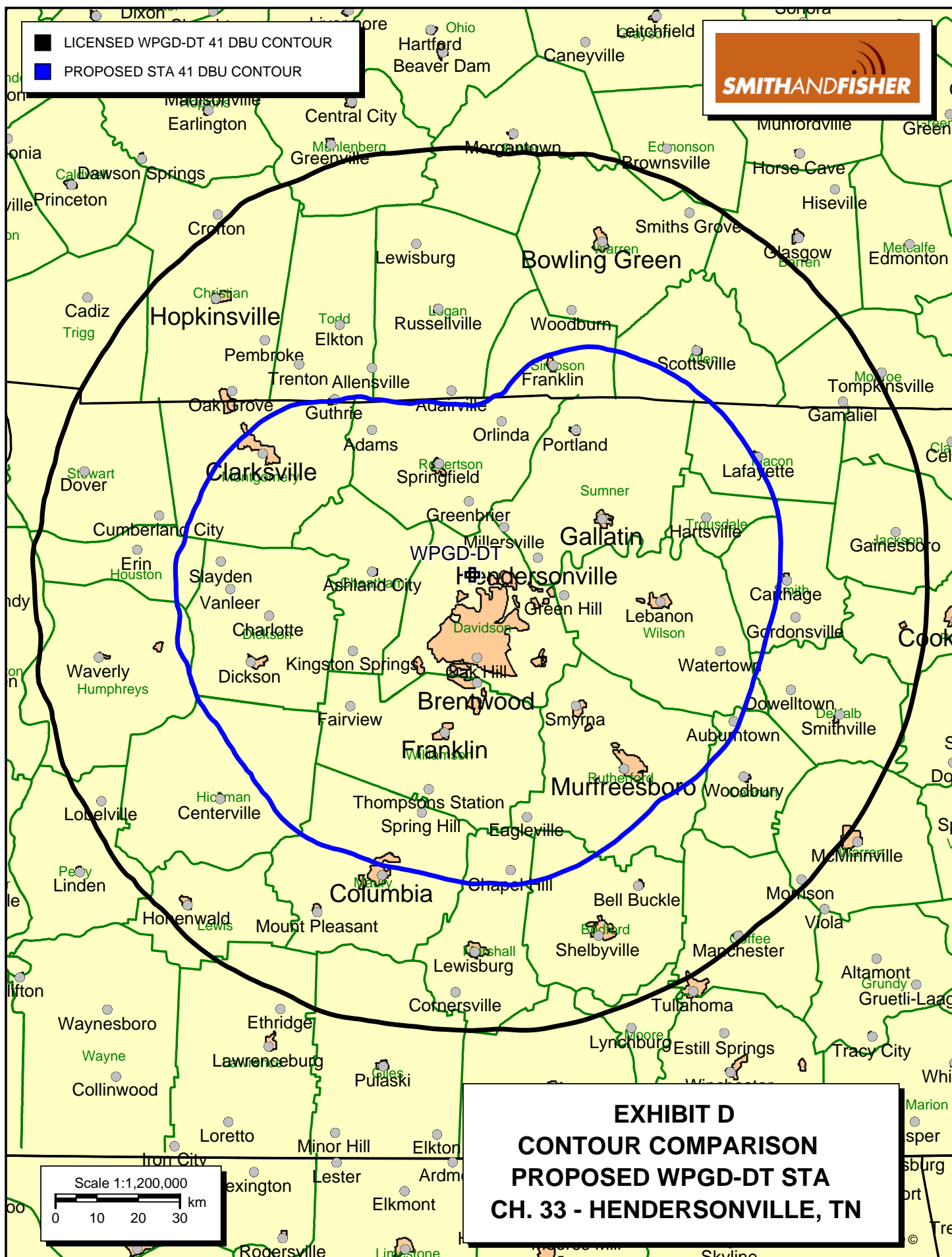
CONTOUR POPULATION

48 DBU : 1,279,120

41 DBU : 1,394,797

SMITHANDFISHER





POWER DENSITY CALCULATION

PROPOSED WPGD-DT STA
CHANNEL 33 – HENDERSONVILLE, TENNESSEE

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Hendersonville facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 175 kW, an antenna radiation center 152 meters above ground, and the elevation pattern of the Dielectric antenna, maximum power density two meters above ground of 0.0072 mw/cm^2 is calculated to occur 83 meters south-southeast of the base of the tower. Since this is only 1.8 percent of the 0.39 mw/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 33 (584-590 MHz), a grant of this proposal may be considered a minor environmental action with respect to public and occupational ground-level exposure to nonionizing 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 nonionizing radiation.