

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of JACKSONVILLE EDUCATORS BROADCASTING, INC., licensee of full-power digital television station WTCE-DT, Channel 38 in Fort Pierce, Florida, in support of this request for Special Temporary Authority (STA) to operate with a temporary antenna while the main antenna is removed in order to mount the new antenna on its post-repack channel, Channel 18. No change in site location is proposed herein.

It is proposed to mount a Radio Frequency Systems (RFS) directional horizontally-polarized antenna at the 121.9-meter level of the existing 312-meter tower on which the present WTCE-DT antenna is mounted. The proposed effective radiated power for the temporary facility will be 400 kW. Exhibit B is a map upon which the predicted service contours are plotted. As shown, the community of Fort Pierce is completely encompassed by the proposed STA 48 dBu city-grade service contour. Exhibit C is a map on which we have plotted the noise-limited service contours of licensed WTCE-DT and that of the proposed STA facility. As shown, the contour of the STA facility is completely contained within that of the licensed facility. As a result and for that reason, no interference study is included herein.

Azimuth and elevation pattern information for the proposed antenna are provided in Exhibit D. A power density calculation appears as Exhibit E.

Since no change in the overall height or location of the existing WTCE-DT 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 1018573 to this tower.

EXHIBIT A

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". The signature is stylized with a large "K", a small "T", and a long horizontal stroke for the last name.

KEVIN T. FISHER

March 2, 2018

CONTOUR POPULATION
2015 U.S. CENSUS DATA
48 DBU : 1,556,136 (732,175 HH)
N/L CONTOUR : 1,734,254 (832,191 HH)

Smith and Fisher, LLC

PROPOSED STA FACILITY
N/L CONTOUR

PROPOSED STA FACILITY
48 DBU CONTOUR

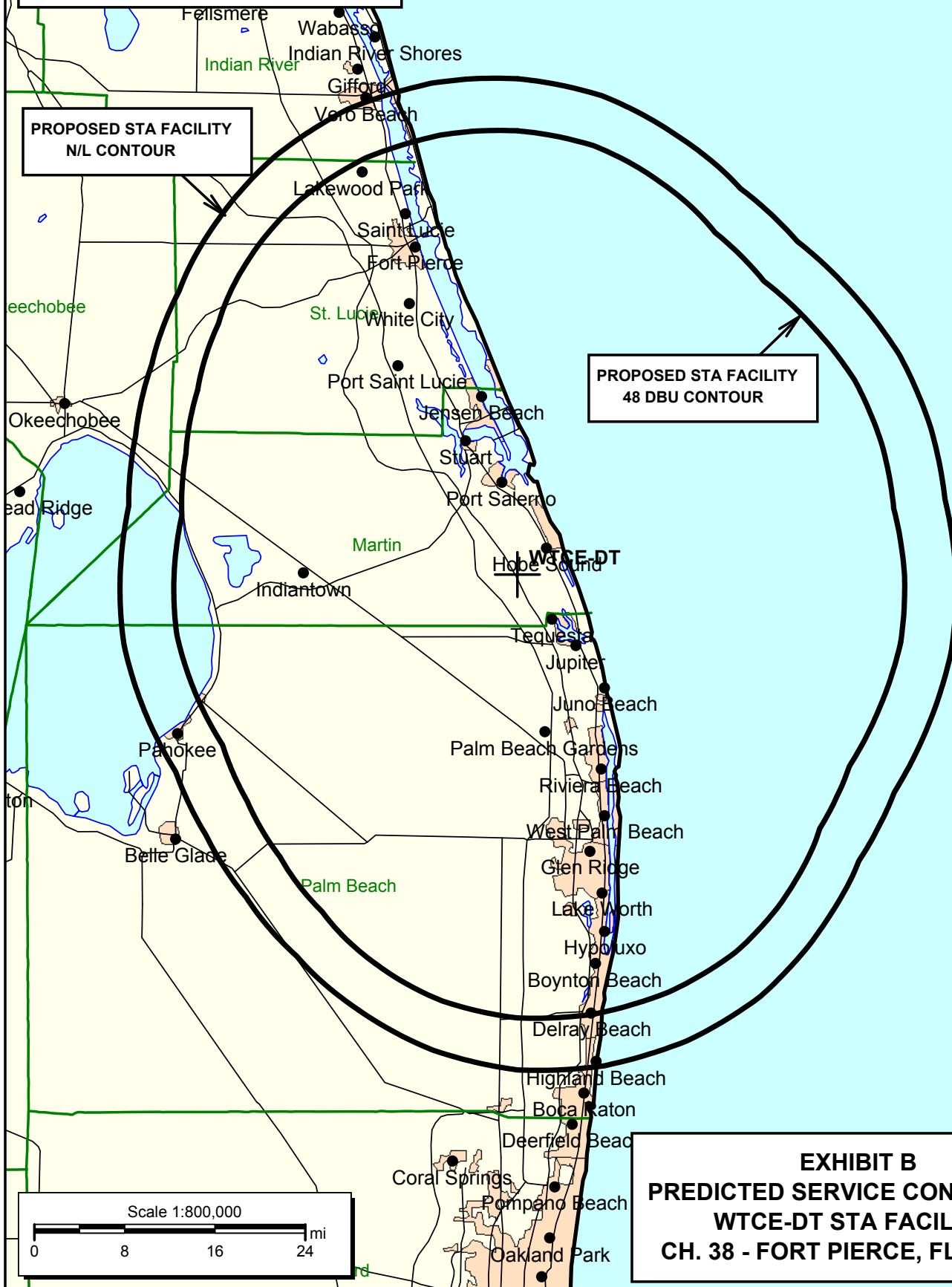


EXHIBIT B
PREDICTED SERVICE CONTOURS
WTCE-DT STA FACILITY
CH. 38 - FORT PIERCE, FLORIDA

Smith and Fisher, LLC

LICENSED N/L
CONTOUR

PROPOSED STA FACILITY
N/L CONTOUR

WTCE-DT

Scale 1:1,000,000
0 10 20 30 mi

EXHIBIT C
CONTOUR COMPARISON
LICENSED VS. STA FACILITY
WTCE-DT
CH. 38 - FORT PIERCE, FLORIDA

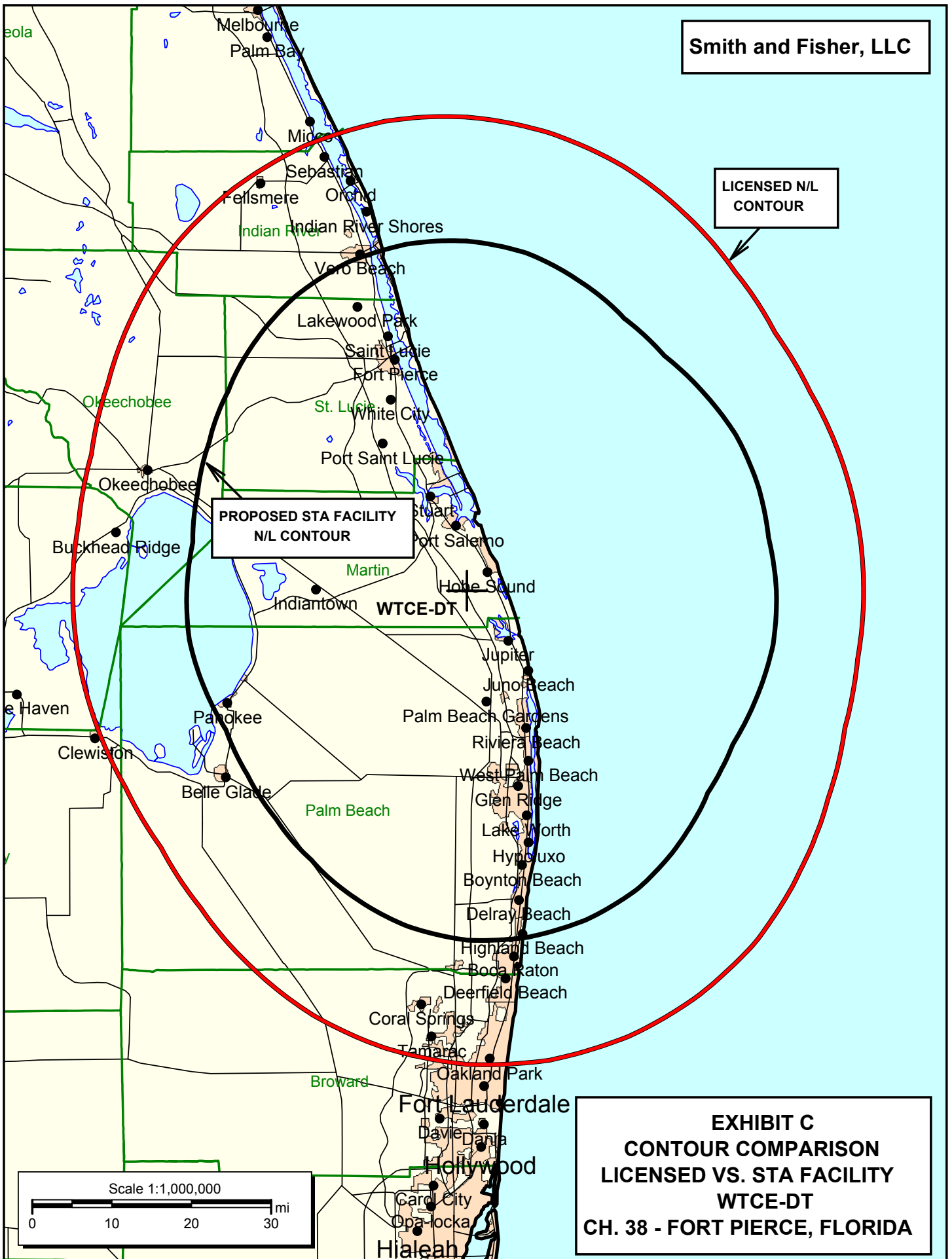
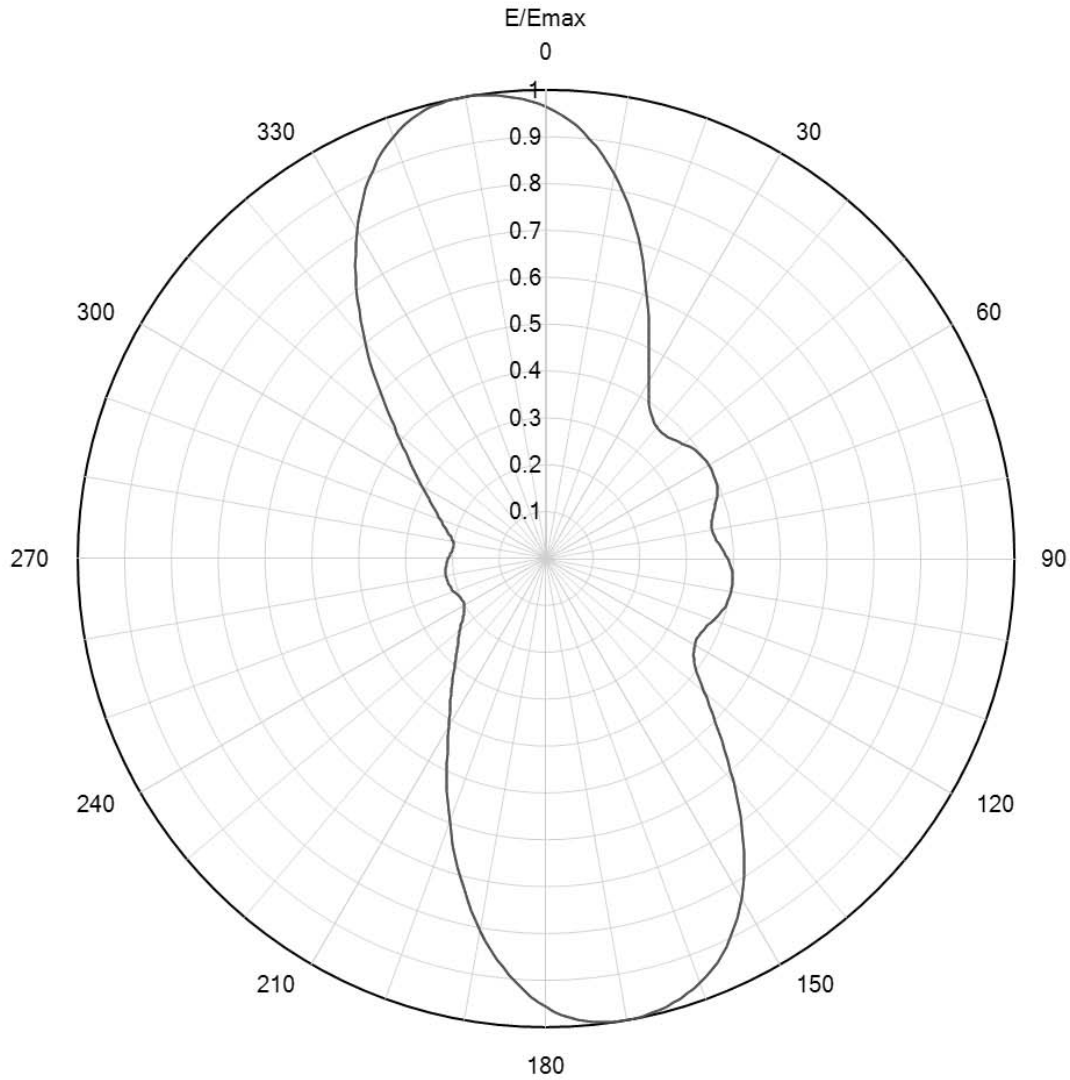




EXHIBIT D

Azimuth Pattern



Model: RD-12RFS(H)-500626-SM
Location: Fort Pierce, FL.
Customer: Trinity Broadcasting Network
Date: August 8, 2017
Rotation Angle: 80 degrees

Polarisation: Horizontal
Frequency: 617.00 MHz
Directivity: 2.9 (4.61 dB)
Elevation Angle: 0.75 degrees
Horizontal Unit Pattern:
File = RD_perfect_RFS(H)_560.pat

Note: Pattern Tolerance +/-5% of Emax



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Date: **August 8, 2017**

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Elevation Angle: **0.75 degrees**
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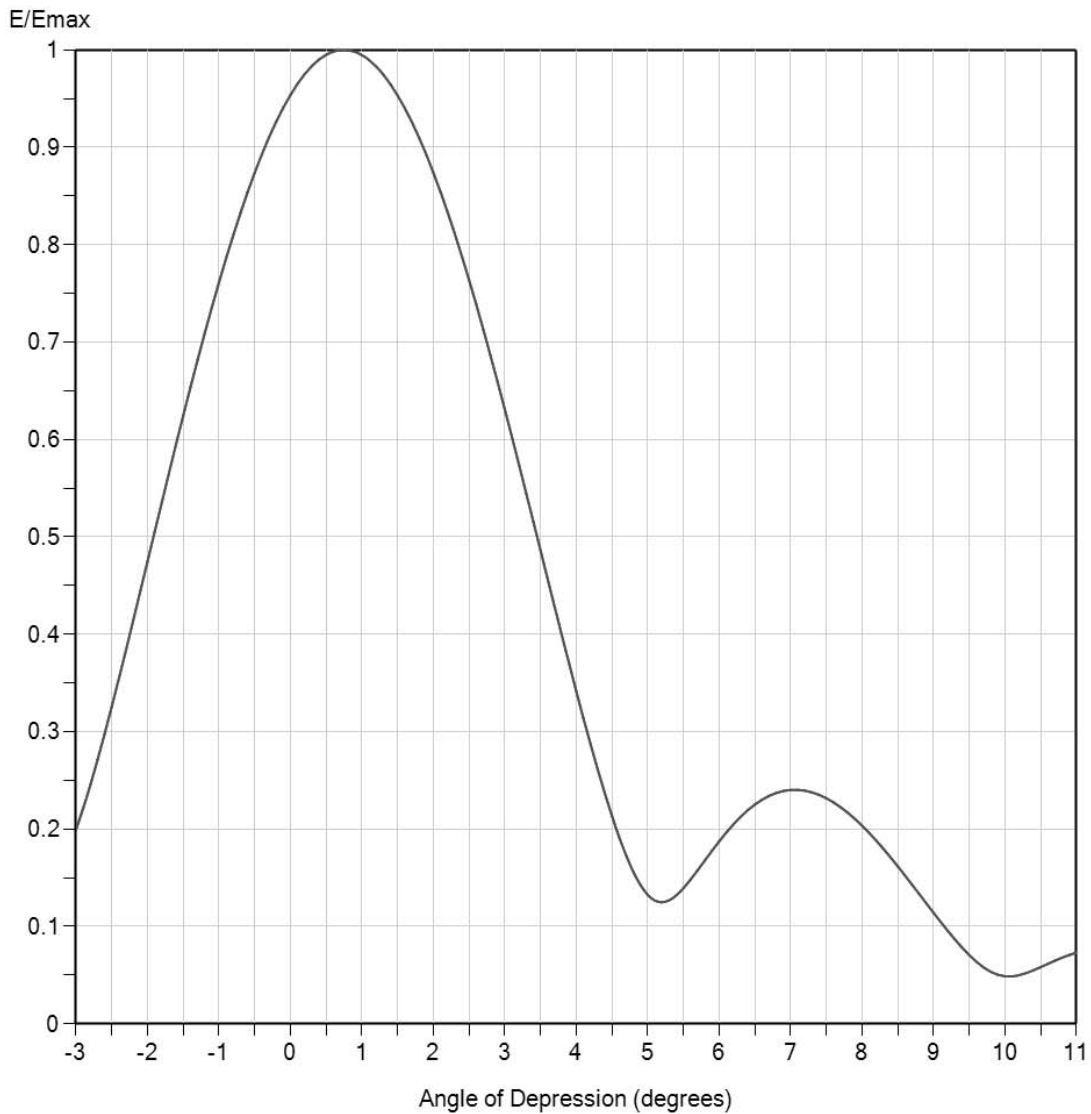
TABULATED AZIMUTH PATTERN

Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field
0	0.963	45	0.368	90	0.388	135	0.522	180	0.957	225	0.268	270	0.209	315	0.501
1	0.955	46	0.369	91	0.391	136	0.540	181	0.946	226	0.262	271	0.207	316	0.521
2	0.946	47	0.372	92	0.394	137	0.560	182	0.935	227	0.256	272	0.206	317	0.541
3	0.936	48	0.375	93	0.396	138	0.580	183	0.922	228	0.250	273	0.204	318	0.561
4	0.925	49	0.378	94	0.398	139	0.601	184	0.908	229	0.245	274	0.202	319	0.581
5	0.913	50	0.381	95	0.399	140	0.623	185	0.893	230	0.240	275	0.201	320	0.601
6	0.899	51	0.384	96	0.400	141	0.645	186	0.878	231	0.235	276	0.200	321	0.622
7	0.885	52	0.388	97	0.401	142	0.667	187	0.861	232	0.230	277	0.199	322	0.643
8	0.869	53	0.391	98	0.401	143	0.690	188	0.844	233	0.225	278	0.199	323	0.663
9	0.853	54	0.394	99	0.401	144	0.713	189	0.826	234	0.221	279	0.200	324	0.684
10	0.836	55	0.396	100	0.401	145	0.735	190	0.807	235	0.216	280	0.201	325	0.705
11	0.817	56	0.398	101	0.401	146	0.757	191	0.788	236	0.212	281	0.203	326	0.726
12	0.798	57	0.399	102	0.400	147	0.778	192	0.768	237	0.209	282	0.206	327	0.747
13	0.778	58	0.400	103	0.399	148	0.798	193	0.747	238	0.206	283	0.209	328	0.768
14	0.757	59	0.401	104	0.398	149	0.817	194	0.726	239	0.203	284	0.212	329	0.788
15	0.735	60	0.401	105	0.396	150	0.836	195	0.705	240	0.201	285	0.216	330	0.807
16	0.713	61	0.401	106	0.394	151	0.853	196	0.684	241	0.200	286	0.221	331	0.826
17	0.690	62	0.401	107	0.391	152	0.869	197	0.663	242	0.199	287	0.225	332	0.844
18	0.667	63	0.401	108	0.388	153	0.885	198	0.643	243	0.199	288	0.230	333	0.861
19	0.645	64	0.400	109	0.384	154	0.899	199	0.622	244	0.200	289	0.235	334	0.878
20	0.623	65	0.399	110	0.381	155	0.913	200	0.601	245	0.201	290	0.240	335	0.893
21	0.601	66	0.398	111	0.378	156	0.925	201	0.581	246	0.202	291	0.245	336	0.908
22	0.580	67	0.396	112	0.375	157	0.936	202	0.561	247	0.204	292	0.250	337	0.922
23	0.560	68	0.394	113	0.372	158	0.946	203	0.541	248	0.206	293	0.256	338	0.935
24	0.540	69	0.391	114	0.369	159	0.955	204	0.521	249	0.207	294	0.262	339	0.946
25	0.522	70	0.388	115	0.368	160	0.963	205	0.501	250	0.209	295	0.268	340	0.957
26	0.504	71	0.385	116	0.366	161	0.970	206	0.482	251	0.210	296	0.274	341	0.966
27	0.486	72	0.381	117	0.365	162	0.976	207	0.464	252	0.211	297	0.281	342	0.974
28	0.470	73	0.377	118	0.365	163	0.982	208	0.447	253	0.213	298	0.288	343	0.981
29	0.454	74	0.373	119	0.366	164	0.986	209	0.431	254	0.214	299	0.296	344	0.987
30	0.439	75	0.370	120	0.367	165	0.990	210	0.415	255	0.215	300	0.305	345	0.991
31	0.426	76	0.366	121	0.369	166	0.994	211	0.401	256	0.215	301	0.313	346	0.995
32	0.414	77	0.364	122	0.372	167	0.996	212	0.388	257	0.216	302	0.323	347	0.997
33	0.404	78	0.362	123	0.376	168	0.998	213	0.376	258	0.217	303	0.332	348	0.999
34	0.394	79	0.361	124	0.381	169	0.999	214	0.364	259	0.217	304	0.342	349	1.000
35	0.387	80	0.360	125	0.387	170	1.000	215	0.353	260	0.217	305	0.353	350	1.000
36	0.381	81	0.361	126	0.394	171	1.000	216	0.342	261	0.217	306	0.364	351	0.999
37	0.376	82	0.362	127	0.404	172	0.999	217	0.332	262	0.217	307	0.376	352	0.998
38	0.372	83	0.364	128	0.414	173	0.997	218	0.323	263	0.216	308	0.388	353	0.996
39	0.369	84	0.366	129	0.426	174	0.995	219	0.313	264	0.215	309	0.401	354	0.994
40	0.367	85	0.370	130	0.439	175	0.991	220	0.305	265	0.215	310	0.415	355	0.990
41	0.366	86	0.373	131	0.454	176	0.987	221	0.296	266	0.214	311	0.431	356	0.986
42	0.365	87	0.377	132	0.470	177	0.981	222	0.288	267	0.213	312	0.447	357	0.982
43	0.365	88	0.381	133	0.486	178	0.974	223	0.281	268	0.211	313	0.464	358	0.976
44	0.366	89	0.385	134	0.504	179	0.966	224	0.274	269	0.210	314	0.482	359	0.970



EXHIBIT D

Elevation Pattern

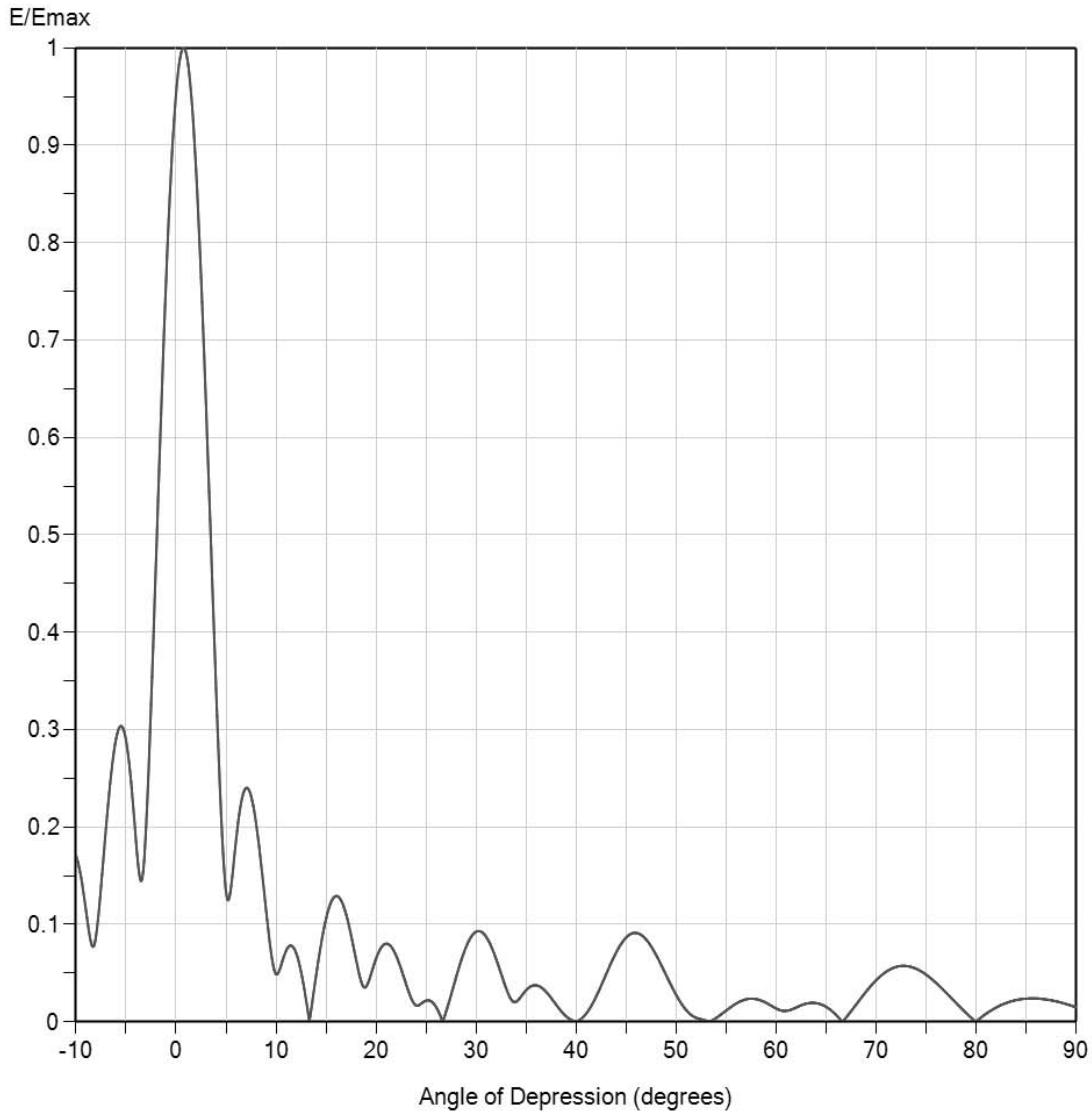


Model:	RD-12RFS(H)-500626-SM	Frequency:	617.00 MHz
Polarisation:	<u>Horizontal</u>	Directivity (Main Lobe):	14.8 (11.69 dBd)
Location:	Fort Pierce, FL.	Directivity (At Horizon):	13.4 (11.28 dBd)
Customer:	Trinity Broadcasting Network	Beam Tilt:	0.75 degrees
Date:	August 8, 2017	Azimuth Angle:	350 degrees



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Elevation Pattern



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Location: **Fort Pierce, FL.**
Customer: **Trinity Broadcasting Network**
Date: **August 8, 2017**

Polarization: **Horizontal**
Frequency (MHz): **617.00**
Directivity (Main Lobe): **14.8 (11.69 dB)**
Directivity (At Horizon): **13.4 (11.28 dB)**
Beam Tilt: **0.75 degrees**

TABULATED ELEVATION PATTERN

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.170	2.4	0.788	10.6	0.062	30.5	0.092	51.0	0.012	71.5	0.054
-9.5	0.148	2.6	0.739	10.8	0.068	31.0	0.087	51.5	0.007	72.0	0.056
-9.0	0.113	2.8	0.686	11.0	0.073	31.5	0.077	52.0	0.004	72.5	0.057
-8.5	0.081	3.0	0.631	11.5	0.078	32.0	0.064	52.5	0.003	73.0	0.057
-8.0	0.089	3.2	0.574	12.0	0.071	32.5	0.049	53.0	0.001	73.5	0.056
-7.5	0.139	3.4	0.515	12.5	0.051	33.0	0.034	53.5	0.001	74.0	0.054
-7.0	0.200	3.6	0.457	13.0	0.022	33.5	0.023	54.0	0.004	74.5	0.052
-6.5	0.254	3.8	0.398	13.5	0.012	34.0	0.021	54.5	0.008	75.0	0.048
-6.0	0.291	4.0	0.342	14.0	0.048	34.5	0.026	55.0	0.012	75.5	0.044
-5.5	0.304	4.2	0.287	14.5	0.080	35.0	0.033	55.5	0.015	76.0	0.040
-5.0	0.289	4.4	0.237	15.0	0.106	35.5	0.037	56.0	0.019	76.5	0.035
-4.5	0.246	4.6	0.192	15.5	0.123	36.0	0.037	56.5	0.021	77.0	0.030
-4.0	0.184	4.8	0.156	16.0	0.129	36.5	0.035	57.0	0.023	77.5	0.024
-3.5	0.145	5.0	0.132	16.5	0.125	37.0	0.031	57.5	0.024	78.0	0.019
-3.0	0.200	5.2	0.125	17.0	0.110	37.5	0.024	58.0	0.023	78.5	0.014
-2.8	0.245	5.4	0.132	17.5	0.088	38.0	0.017	58.5	0.022	79.0	0.009
-2.6	0.298	5.6	0.148	18.0	0.063	38.5	0.011	59.0	0.019	79.5	0.004
-2.4	0.355	5.8	0.168	18.5	0.041	39.0	0.006	59.5	0.016	80.0	0.001
-2.2	0.414	6.0	0.187	19.0	0.036	39.5	0.002	60.0	0.014	80.5	0.005
-2.0	0.475	6.2	0.205	19.5	0.049	40.0	0.000	60.5	0.012	81.0	0.008
-1.8	0.536	6.4	0.219	20.0	0.065	40.5	0.003	61.0	0.011	81.5	0.012
-1.6	0.595	6.6	0.230	20.5	0.076	41.0	0.008	61.5	0.013	82.0	0.015
-1.4	0.653	6.8	0.237	21.0	0.080	41.5	0.016	62.0	0.015	82.5	0.017
-1.2	0.709	7.0	0.240	21.5	0.077	42.0	0.026	62.5	0.017	83.0	0.019
-1.0	0.761	7.2	0.239	22.0	0.068	42.5	0.037	63.0	0.019	83.5	0.021
-0.8	0.810	7.4	0.235	22.5	0.054	43.0	0.049	63.5	0.019	84.0	0.022
-0.6	0.854	7.6	0.227	23.0	0.038	43.5	0.061	64.0	0.019	84.5	0.023
-0.4	0.893	7.8	0.217	23.5	0.024	44.0	0.071	64.5	0.018	85.0	0.024
-0.2	0.926	8.0	0.203	24.0	0.017	44.5	0.080	65.0	0.015	85.5	0.024
0.0	0.954	8.2	0.188	24.5	0.019	45.0	0.087	65.5	0.012	86.0	0.024
0.2	0.975	8.4	0.171	25.0	0.022	45.5	0.090	66.0	0.007	86.5	0.024
0.4	0.990	8.6	0.152	25.5	0.021	46.0	0.091	66.5	0.001	87.0	0.023
0.6	0.998	8.8	0.133	26.0	0.015	46.5	0.089	67.0	0.005	87.5	0.022
0.8	1.000	9.0	0.114	26.5	0.004	47.0	0.084	67.5	0.011	88.0	0.021
1.0	0.995	9.2	0.095	27.0	0.011	47.5	0.077	68.0	0.018	88.5	0.020
1.2	0.983	9.4	0.078	27.5	0.028	48.0	0.068	68.5	0.025	89.0	0.018
1.4	0.965	9.6	0.064	28.0	0.046	48.5	0.058	69.0	0.031	89.5	0.017
1.6	0.940	9.8	0.053	28.5	0.063	49.0	0.048	69.5	0.037	90.0	0.000
1.8	0.910	10.0	0.049	29.0	0.077	49.5	0.037	70.0	0.043		
2.0	0.874	10.2	0.050	29.5	0.087	50.0	0.027	70.5	0.048		
2.2	0.833	10.4	0.055	30.0	0.093	50.5	0.019	71.0	0.052		

POWER DENSITY CALCULATION

PROPOSED WTCE-DT STA FACILITY
CHANNEL 38 – FORT PIERCE, FLORIDA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Fort Pierce facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 400 kW, an antenna radiation center 121.9 meters above ground, and the specific elevation pattern for the proposed WTCE-DT RFS antenna, maximum power density two meters above ground of 0.0028 mW/cm^2 is calculated to occur 37 meters north-northwest and south-southeast of the base of the tower. Since this is only 0.7 percent of the 0.41 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 38 (614-620 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.