

WAIQ-DT CHANNEL 27 MINOR MODIFICATION  
OF CONSTRUCTION PERMIT APPLICATION TO  
CHANGE THE FOLLOWING: 1) ANTENNA  
SYSTEM; 2) EFFECTIVE RADIATED POWER; AND  
3) ANTENNA HEIGHT RADIATION CENTER  
*MONTGOMERY, ALABAMA*  
*(ALABAMA EDUCATIONAL TELEVISION COMMISSION)*

KESSLER & GEHMAN ASSOCIATES, INC.  
TELECOMMUNICATIONS CONSULTING ENGINEERS

20060607

*Prepared by William T. Godfrey, Jr.*

*KG&A*

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Gainesville, Florida 32607

**ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR  
WITH THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS  
CONSULTING ENGINEERS IN CONNECTION WITH A MINOR MODIFICATION OF  
CONSTRUCTION PERMIT APPLICATION TO MAKE CHANGES TO THE ALABAMA  
EDUCATIONAL TELEVISION COMMISSION (AETC) DIGITAL BROADCAST FACILITY,  
WAIQ-DT CHANNEL 27 (BMPEDT-20021122AAW), MONTGOMERY, ALABAMA.**

The firm Kessler and Gehman Associates, Inc. has been retained by the Alabama Educational Television Commission (AETC), Birmingham, Alabama in order to prepare engineering studies and the engineering portion of a minor modification of construction permit application for the WAIQ-DT Channel 27 digital television broadcast facility for the purpose of requesting authorization to make changes to the following: 1) antenna system; 2) effective radiated power (ERP); and 3) antenna height radiation center.

**Discussion**

The WAIQ-DT Channel 27 facility currently operates under an STA with an ERP of 567.54 kW and an antenna height radiation center of 160 meters above ground level (AGL) using a nondirectional antenna. AETC is authorized to operate the WAIQ-DT facility on digital Channel 27 with an ERP of 750 kW and an antenna height radiation center of 160 meters AGL using a nondirectional, top-mounted TCI model 888-8-32 antenna.

The digital channel allotted for WAIQ-DT, Channel 27, is one channel above the licensed NTSC facility, Channel 26. AETC awarded an antenna contract to procure a Dielectric model TFU-36GTH-R O4 DC dual-channel (N26/D27), nondirectional antenna for the WAIQ analog and digital facilities in order to combine the signals using a common dual-channel antenna.

AETC proposes to modify the existing WAIQ-DT Channel 27 construction permit (BMPEDT-20021122AAW) by replacing the authorized TCI model 888-8-32 top-mount, nondirectional

antenna with a new Dielectric model TFU-36GTH-R O4 DC dual-channel (N26/D27), nondirectional antenna. The proposed Dielectric model TFU-36GTH-R O4 DC dual-channel (N26/D27), nondirectional antenna is longer in length than the authorized top-mounted nondirectional antenna; therefore, it is proposed to increase the antenna height radiation center by 2.8 meters. The change in antenna systems will result in an omni-for-omni swap; and it is proposed to decrease the ERP from the authorized 750 kW to 600 kW. AETC purchased a 25 kW digital transmitter for the WAIQ-DT facility and proposes to operate the transmitter slightly below the maximum rated transmitter power output (TPO) for maintenance purposes. The proposed 22.6 kW TPO will result in a maximum ERP of 600 kW which is 150 kW less than the authorized ERP. The reduced ERP will compensate for the slight increase in antenna height so that the proposed F(50,90) 41.0 dBuV/m protected noise limited contour will not exceed the authorized F(50,90) 41.0 dBuV/m protected noise limited contour in any azimuthal direction (Exhibits 10-14).

Accordingly, this minor modification of construction permit application requests authorization to make the following changes: 1) change antennas from the authorized TCI model 888-8-32 top-mount, nondirectional antenna to the proposed Dielectric model TFU-36GTH-R O4 DC dual-channel (N26/D27), nondirectional antenna; 2) decrease the ERP from the authorized 750 kW to the proposed 600 kW; and 3) increase the antenna height radiation center from the authorized height of 160.0 meters AGL to the proposed height of 162.8 meters AGL.

Exhibit 10 is a contour map depicting the authorized F(50,90) 41.0 dBuV/m protected noise limited contour (blue) and the proposed F(50,90) 41.0 dBuV/m protected noise limited contour (red). Referring to Exhibit 10 it can be seen that the proposed F(50,90) 41.0 dBuV/m noise limited contour would be completely encompassed by the authorized F(50,90) 41.0 dBuV/m noise limited contour in all azimuthal directions. Since the authorized F(50,90) 41.0 dBuV/m noise limited contour fully encompasses the proposed F(50,90) 41.0 dBuV/m noise limited contour, it is not required to perform interference studies considering that the proposed facility's potential for causing interference is reduced in all directions and will only improve the overall

picture with respect to incoming interference to other stations. For the same reason, a freeze waiver is not required since this proposal would not violate the filing freeze that is currently in effect.

Exhibit 11 is a distance to contour tabulation sheet depicting the distance in kilometers from the WAIQ-DT transmitter site to the edge of the authorized F(50,90) 41.0 dBuV/m contour in one-degree increments.

Exhibit 12 is a distance to contour tabulation sheet depicting the distance in kilometers from the WAIQ-DT transmitter site to the edge of the proposed F(50,90) 41.0 dBuV/m contour in one-degree increments.

Exhibit 13 depicts the data extracted from Exhibits 11 and 12 and compares the distances. The second column from the left in Exhibit 13 depicts the distances to the authorized F(50,90) 41.0 dBuV/m contour and the third column from the left depicts the distances to the proposed F(50,90) 41.0 dBuV/m contour. The second column from the right is a “PASS/FAIL” column where “PASS” is depicted if the distance to the authorized F(50,90) 41.0 dBuV/m contour for each particular radial is greater than or equal to the distance to the proposed F(50,90) 41.0 dBuV/m contour. The word “FAIL” is depicted if the distance to the proposed F(50,90) 41.0 dBuV/m contour exceeds the distance to the authorized F(50,90) 41.0 dBuV/m contour. Finally, the last column to the right displays the difference in kilometers between the two facilities. Exhibit 13 demonstrates that the proposed F(50,90) 41.0 dBuV/m contour would be completely encompassed by the authorized F(50,90) 41.0 dBuV/m contour in all azimuthal directions.

Exhibit 14 is a chart, created from the tabulation depicted in Exhibit 13, demonstrating pictorially that the distance from the transmitter site to the proposed F(50,90) 41.0 dBuV/m contour (red) is less than the distance from the transmitter site to the authorized F(50,90) 41.0 dBuV/m contour (blue) along all radials.

Exhibit 15 is a principal community contour map demonstrating that the proposed F(50,90) 41.0 dBuV/m Principal Community contour would completely encompass the entire community of Montgomery, AL.

### **Interference Studies**

The authorized F(50,90) 41.0 dBuV/m noise limited contour fully encompasses the proposed F(50,90) 41.0 dBuV/m noise limited contour; therefore, it is not required to perform interference studies. The proposed facility's potential for causing interference is reduced in all directions and will only improve the overall picture with respect to incoming interference to other stations. A freeze waiver is not required since this proposal would not violate the filing freeze that is currently in effect.

### **Transmitter Site**

The proposed WAIQ-DT antenna is a top-mount Dielectric model TFU-36GTH-R O4 DC dual-channel (N26/D27), nondirectional antenna. The tower is registered with the FCC and the registration number is 1036422. The support structure is located at 1300 Upper Wetumpka Road in Montgomery, Alabama. The proposed antenna height radiation center is 162.8 meters AGL.

### **Exhibits**

Exhibits 1 and 2 represent WAIQ-DT's administration data, antenna and antenna structure specifications.

Exhibit 3 depicts the profile view of the proposed antenna on the antenna structure with all the appropriate elevations.

Exhibits 4 and 5 display the proposed antenna azimuth pattern and the proposed antenna azimuth pattern tabulation respectively.

Exhibits 6 and 7 display the antenna elevation pattern and Exhibit 8 displays the antenna elevation pattern tabulation.

Exhibit 9 depicts the location of the WAIQ-DT site on a 7.5-Minute (Series) Topographic map.

Exhibit 10 depicts the WAIQ-DT Channel 27 authorized and proposed F(50,90) 41.0 dBuV/m protected noise limited contours and demonstrates that the authorized F(50,90) 41.0 dBuV/m protected noise limited contour would encompass the proposed F(50,90) 41.0 dBuV/m protected noise limited contour in all azimuthal directions.

Exhibit 11 is a distance to contour tabulation sheet depicting the distance in kilometers from the WAIQ-DT transmitter site to the edge of the authorized F(50,90) 41.0 dBuV/m protected noise limited contour in one-degree increments.

Exhibit 12 is a distance to contour tabulation sheet depicting the distance in kilometers from the WAIQ-DT transmitter site to the edge of the proposed F(50,90) 41.0 dBuV/m protected noise limited contour in one-degree increments.

Exhibit 13 depicts the data extracted from Exhibits 11 and 12, compares the distances and demonstrates that the proposed F(50,90) 41.0 dBuV/m protected noise limited contour would be completely encompassed by the authorized F(50,90) 41.0 dBuV/m protected noise limited contour in all azimuthal directions.

Exhibit 14 is a chart, created from the tabulation depicted in Exhibit 13, demonstrating pictorially that the distance from the transmitter site to the proposed F(50,90) 41.0 dBuV/m

contour (red) is less than the distance from the transmitter site to the authorized F(50,90) 41.0 dBuV/m contour ( blue) along all radials.

Exhibit 15 depicts the proposed WAIQ-DT F(50,90) 48.0 dBuV/m Principal Community contour, boundaries of the principal community to be served, and the transmitting location with radials every 45°.

### **Environmental Impact**

The proposed construction would have no significant environmental impact as defined in §1.1307 of the FCC Rules. The DTV transmitter, 6-1/8 inch (75-ohm) DigiTLine® and antenna system would produce an ERP of 600 kW. It was determined that the maximum lobe of radiation from the base of the tower out to approximately 1,158.6 feet would occur at approximately 405.1 feet from the base of the tower (665.5-foot radial distance from the antenna center). At approximately 405.1 feet from the base of the tower, the depression angle of the main lobe would be 52.5° below the horizontal. At that point, the relative field would be 0.046 and the power density six feet above the ground would be 0.00164 mW/cm². This is only 0.09% of the Maximum Permissible Exposure (“MPE”) limits for Occupational/Controlled Exposure and only 0.45% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (“ANSI”). Since the proposed operation of WAIQ-DT Channel 27 would not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, WAIQ-DT would not be considered a “significant contributor” to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions would be insignificant and well within the maximum allowable requirements.


If other antennas are placed on the tower in the future, the applicant will cooperate with those users by reducing or completely terminating the power to the antenna when maintenance workers are in danger from the electromagnetic radiation emanating from the antenna.

It is understood that additional "future" antennas mounted on the support structure could increase the overall RF exposure levels and it is the responsibility of each licensee to ensure that the total RF exposure resulting from the operation of all antennas on the support structure do not exceed the maximum permissible exposure level at any point on the ground.

### **Certification**

This technical statement was prepared by William T. Godfrey, Jr., Telecommunications Technical Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.

  
KESSLER AND GEHMAN ASSOCIATES, INC.

  
WILLIAM T. GODFREY, JR.  
Telecommunications Technical Consultant

07 June, 2006



**WAIQ-DT  
MONTGOMERY, AL**

**ENGINEERING SPECIFICATIONS**

**A. Transmitter Site:**

Geographic coordinates: **NAD 27**

North Latitude .....	32° 22' 55"
West Longitude .....	86° 17' 33"

Transmitter Site Address: **1300 Upper Wetumpka Road, Montgomery, AL.**

**B. Main Studio Site Address: 2112 11<sup>th</sup> Avenue South, Suite 400,  
Birmingham, AL 35205**

**C. Existing Facility:**

DTV Channel	Number .....	27
	Frequency .....	548-554 MHz
	Offset .....	N/A

**D. Antenna Height:**

Height of Site Above Mean Sea Level (AMSL) .....	75.0 M
Overall Height of Structure Above Ground .....	174.0 M
(including all appurtenances)	
Overall Height of Structure Above Mean Sea Level .....	249.0 M
(including all appurtenances)	
Height of Site Above Average Terrain .....	15.9 M
Antenna Height Radiation Center (R/C) Above Ground .....	162.8 M
Antenna Height R/C Above Mean Sea Level .....	237.8 M
Average of All Non-Odd Radials .....	59.1 M
Antenna Height R/C Above Average Terrain .....	178.7 M

**E. System Parameters – Horizontal Polarization:**

Transmitter Power Required: .....	22.6 kW
Maximum Power Input to Antenna: .....	19.1 kW
Transmission Line Loss: .....	0.61 dB
Combiner & Splitter Loss: .....	0.10 dB
Total System Loss: .....	0.71 dB
Transmission Line Efficiency: .....	87.0%
Combiner & Splitter Efficiency: .....	97.7%
Total System Efficiency: .....	84.9%
Maximum Antenna Gain in Beam Maximum .....	14.96 dB
Maximum Antenna Gain in Horizontal Plane .....	12.79 dB
Maximum Effective Radiated Power .....	27.78 dBk
In Beam Maximum .....	600.0 kW
Maximum Effective Radiated Power .....	25.61 dBk
In Horizontal Plane .....	364.0 kW

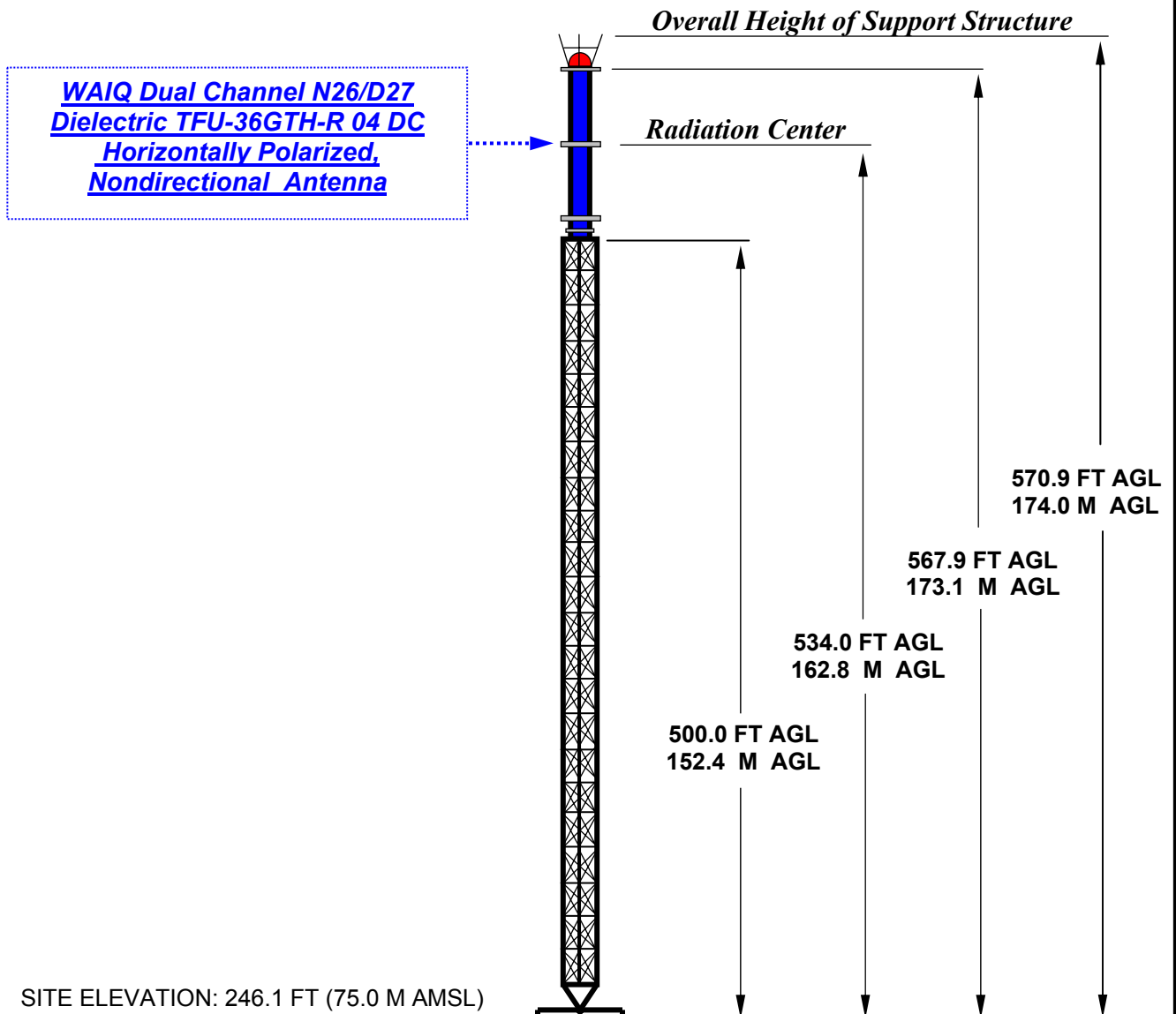
**WAIQ-DT  
MONTGOMERY, ALABAMA**

**DATA FOR PROPOSED NONDIRECTIONAL  
TRANSMITTING ANTENNA**

- A. **Antenna:** Dielectric Model TFU-36GTH-R O4 DC, Horizontally Polarized, Nondirectional, Top-mount, Dual-Channel Antenna.
- B. **Electrical Beam Tilt:** 0.75°
- C. **Mechanical Beam Tilt:** None
- D. 

<b><u>Maximum Power Gain</u></b>	<b><u>Horizontal Polarization</u></b>
Maximum:	31.3 (14.96 dB)
Horizontal:	19.0 (12.79 dB)
- E. **Length:** 67.9 feet (20.7 meters) not including lightning protector.
- F. **Transmitter Power Output:** 22.6 kW
- G. **Null Fill:** 11.0%
- H. **Transmission Line:** 6-1/8" 75-ohm DigiTLine®
- I. **Transmission Line Loss:** 0.114 dB/100-feet
- J. **Total Transmission Line:** 535 feet (182.9 meters)
- K. **Transmission Line Attenuation:** 0.61 dB
- L. **Combiner & Splitter Loss:** 0.10 dB
- M. **Total Antenna System Loss:** 0.71 dB

## ANTENNA STRUCTURE ELEVATION VIEW



OVERALL HEIGHT AGL: 174.0 M  
OVERALL HEIGHT AMSL: 249.0 M  
RADIATION CENTER AGL: 162.8 M  
RADIATION CENTER AMSL: 237.8 M  
RADIATION CENTER HAAT: 178.7 M  
AVG OF ALL NON-ODD RADIALS: 59.1 M  
SITE HAAT: 15.9 M

COORDINATES (NAD 83):  
N. LATITUDE 32° 22' 55"  
W. LONGITUDE 86° 17' 33"  
TOWER REGISTRATION NUMBER:  
1036422  
FAA STUDY NUMBER:  
2004-ASO-4609-OE

NOTE: NOT TO SCALE

**KESSLER AND GEHMAN**  
TELECOMMUNICATIONS CONSULTING ENGINEERS  
507 N.W. 60th Street, Suite C  
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**WAIQ-DT CHANNEL 27**  
**MONTGOMERY, ALABAMA**

20060601

EXHIBIT 3

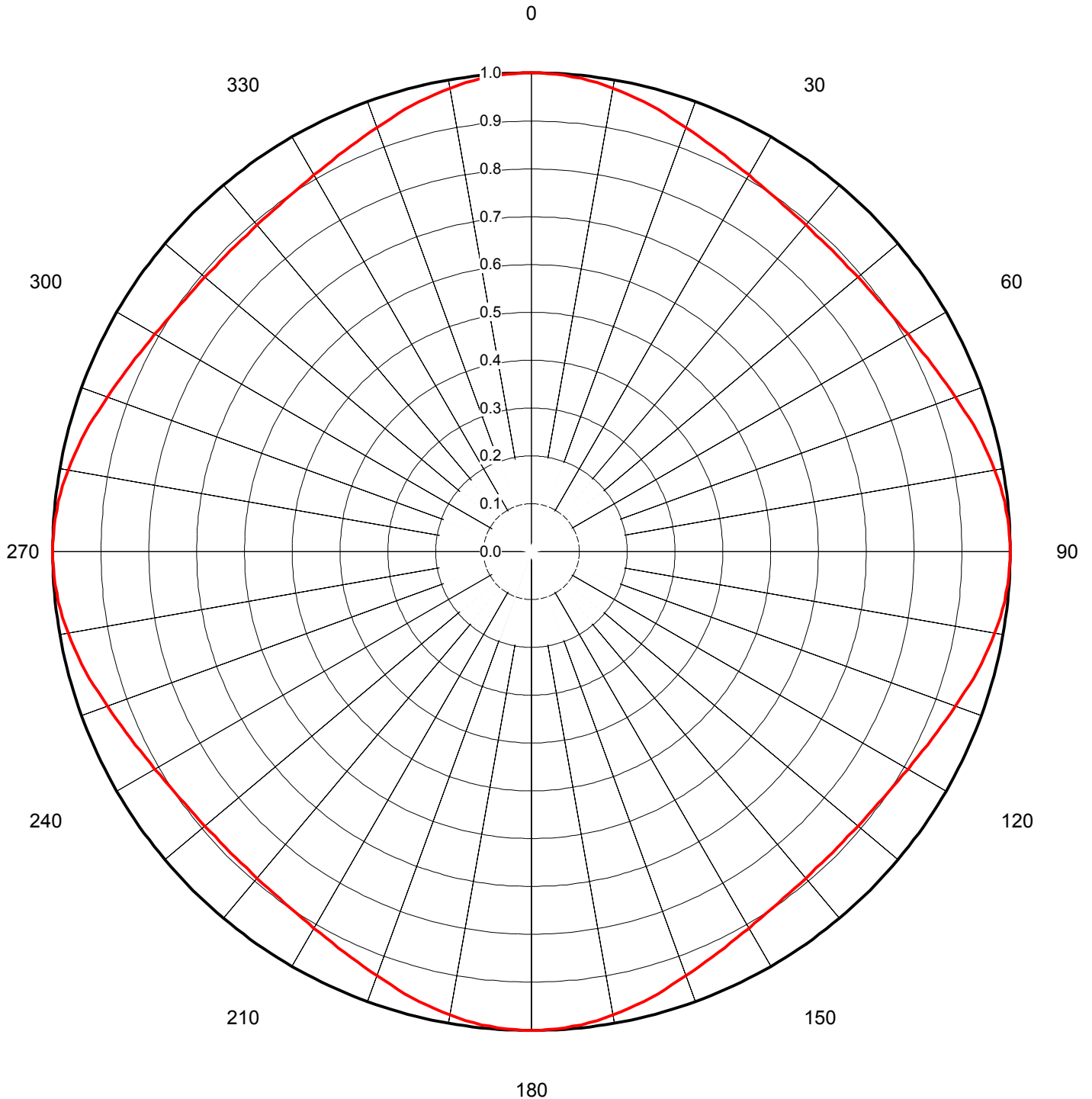


Proposal Number	<b>DCA-10524</b>	Revision:	<b>2</b>
Date	<b>9-Apr-04</b>		
Call Letters	<b>WAIQ-DT</b>	Channel	<b>27</b>
Location	<b>Montgomery, AL</b>		
Customer	<b>APT</b>		
Antenna Type	<b>TFU-36GTH-R O4 DC</b>		

### AZIMUTH PATTERN

Gain **1.10** **(0.41 dB)**  
Calculated / Measured **Calculated**

Frequency **551.00 MHz**  
Drawing # **TFU-O4**





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## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-O4**

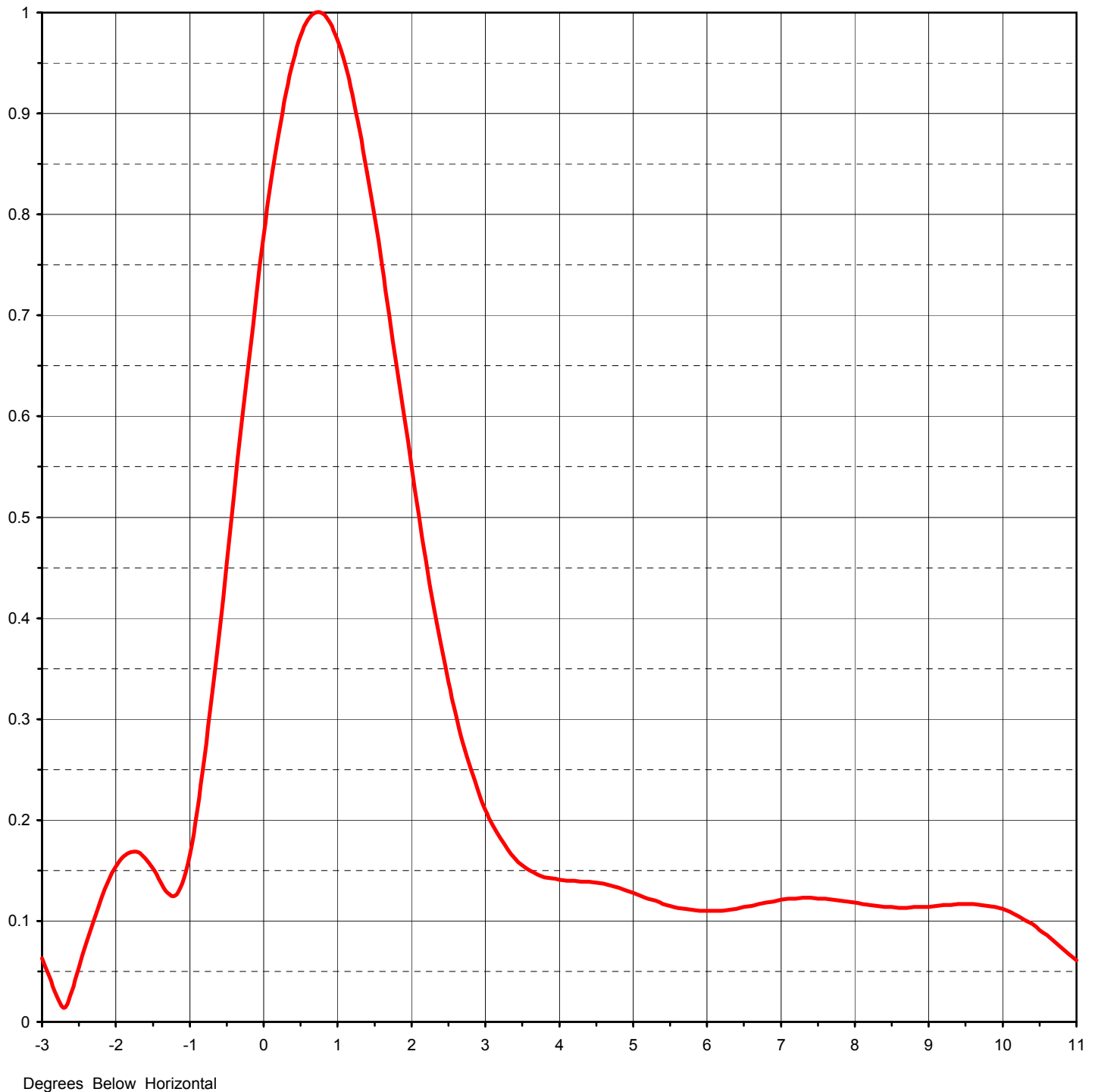
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	1.000	45	0.889	90	1.000	135	0.889	180	1.000	225	0.889	270	1.000	315	0.889
1	1.000	46	0.889	91	1.000	136	0.889	181	1.000	226	0.889	271	1.000	316	0.889
2	0.999	47	0.889	92	0.999	137	0.889	182	0.999	227	0.889	272	0.999	317	0.889
3	0.998	48	0.889	93	0.998	138	0.889	183	0.998	228	0.889	273	0.998	318	0.889
4	0.997	49	0.890	94	0.997	139	0.890	184	0.997	229	0.890	274	0.997	319	0.890
5	0.995	50	0.891	95	0.995	140	0.891	185	0.995	230	0.891	275	0.995	320	0.891
6	0.993	51	0.892	96	0.993	141	0.892	186	0.993	231	0.892	276	0.993	321	0.892
7	0.991	52	0.893	97	0.991	142	0.893	187	0.991	232	0.893	277	0.991	322	0.893
8	0.989	53	0.894	98	0.989	143	0.894	188	0.989	233	0.894	278	0.989	323	0.894
9	0.986	54	0.895	99	0.986	144	0.895	189	0.986	234	0.895	279	0.986	324	0.895
10	0.983	55	0.897	100	0.983	145	0.897	190	0.983	235	0.897	280	0.983	325	0.897
11	0.979	56	0.899	101	0.979	146	0.899	191	0.979	236	0.899	281	0.979	326	0.899
12	0.976	57	0.901	102	0.976	147	0.901	192	0.976	237	0.901	282	0.976	327	0.901
13	0.972	58	0.903	103	0.972	148	0.903	193	0.972	238	0.903	283	0.972	328	0.903
14	0.968	59	0.905	104	0.968	149	0.905	194	0.968	239	0.905	284	0.968	329	0.905
15	0.964	60	0.908	105	0.964	150	0.908	195	0.964	240	0.908	285	0.964	330	0.908
16	0.960	61	0.911	106	0.960	151	0.911	196	0.960	241	0.911	286	0.960	331	0.911
17	0.956	62	0.914	107	0.956	152	0.914	197	0.956	242	0.914	287	0.956	332	0.914
18	0.951	63	0.917	108	0.951	153	0.917	198	0.951	243	0.917	288	0.951	333	0.917
19	0.947	64	0.920	109	0.947	154	0.920	199	0.947	244	0.920	289	0.947	334	0.920
20	0.943	65	0.924	110	0.943	155	0.924	200	0.943	245	0.924	290	0.943	335	0.924
21	0.939	66	0.927	111	0.939	156	0.927	201	0.939	246	0.927	291	0.939	336	0.927
22	0.935	67	0.931	112	0.935	157	0.931	202	0.935	247	0.931	292	0.935	337	0.931
23	0.931	68	0.935	113	0.931	158	0.935	203	0.931	248	0.935	293	0.931	338	0.935
24	0.927	69	0.939	114	0.927	159	0.939	204	0.927	249	0.939	294	0.927	339	0.939
25	0.924	70	0.943	115	0.924	160	0.943	205	0.924	250	0.943	295	0.924	340	0.943
26	0.920	71	0.947	116	0.920	161	0.947	206	0.920	251	0.947	296	0.920	341	0.947
27	0.917	72	0.951	117	0.917	162	0.951	207	0.917	252	0.951	297	0.917	342	0.951
28	0.914	73	0.956	118	0.914	163	0.956	208	0.914	253	0.956	298	0.914	343	0.956
29	0.911	74	0.960	119	0.911	164	0.960	209	0.911	254	0.960	299	0.911	344	0.960
30	0.908	75	0.964	120	0.908	165	0.964	210	0.908	255	0.964	300	0.908	345	0.964
31	0.905	76	0.968	121	0.905	166	0.968	211	0.905	256	0.968	301	0.905	346	0.968
32	0.903	77	0.972	122	0.903	167	0.972	212	0.903	257	0.972	302	0.903	347	0.972
33	0.901	78	0.976	123	0.901	168	0.976	213	0.901	258	0.976	303	0.901	348	0.976
34	0.899	79	0.979	124	0.899	169	0.979	214	0.899	259	0.979	304	0.899	349	0.979
35	0.897	80	0.983	125	0.897	170	0.983	215	0.897	260	0.983	305	0.897	350	0.983
36	0.895	81	0.986	126	0.895	171	0.986	216	0.895	261	0.986	306	0.895	351	0.986
37	0.894	82	0.989	127	0.894	172	0.989	217	0.894	262	0.989	307	0.894	352	0.989
38	0.893	83	0.991	128	0.893	173	0.991	218	0.893	263	0.991	308	0.893	353	0.991
39	0.892	84	0.993	129	0.892	174	0.993	219	0.892	264	0.993	309	0.892	354	0.993
40	0.891	85	0.995	130	0.891	175	0.995	220	0.891	265	0.995	310	0.891	355	0.995
41	0.890	86	0.997	131	0.890	176	0.997	221	0.890	266	0.997	311	0.890	356	0.997
42	0.889	87	0.998	132	0.889	177	0.998	222	0.889	267	0.998	312	0.889	357	0.998
43	0.889	88	0.999	133	0.889	178	0.999	223	0.889	268	0.999	313	0.889	358	0.999
44	0.889	89	1.000	134	0.889	179	1.000	224	0.889	269	1.000	314	0.889	359	1.000



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Date	<b>9-Apr-04</b>		
Call Letters	<b>WAIQ-DT</b>	Channel	<b>27</b>
Location	<b>Montgomery, AL</b>		
Customer	<b>APT</b>		
Antenna Type	<b>TFU-36GTH-R O4 DC</b>		

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>28.50 ( 14.55 dB )</b>	Beam Tilt	<b>0.75 deg</b>
RMS Gain at Horizontal	<b>17.30 ( 12.38 dB )</b>	Frequency	<b>551.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>36G28507D</b>



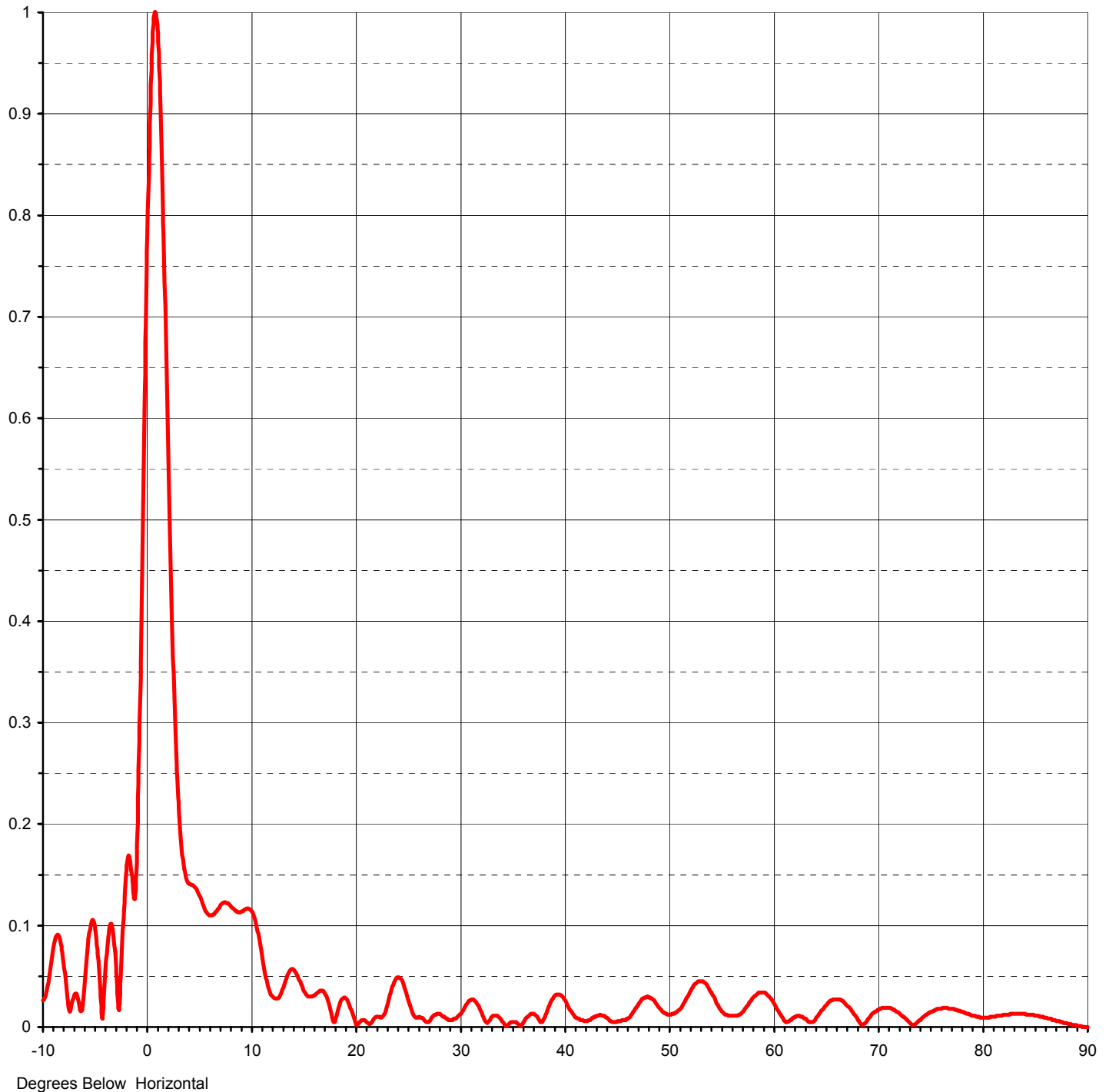


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## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>28.50 ( 14.55 dB )</b>
RMS Gain at Horizontal	<b>17.30 ( 12.38 dB )</b>
Calculated / Measured	<b>Calculated</b>

Beam Tilt	<b>0.75 deg</b>
Frequency	<b>551.00 MHz</b>
Drawing #	<b>36G28507D-90</b>





Proposal Number **DCA-10524**      Revision: **2**  
 Date **9-Apr-04**  
 Call Letters **WAIQ-DT**      Channel **27**  
 Location **Montgomery, AL**  
 Customer **APT**  
 Antenna Type **TFU-36GTH-R O4 DC**

## TABULATION OF ELEVATION PATTERN

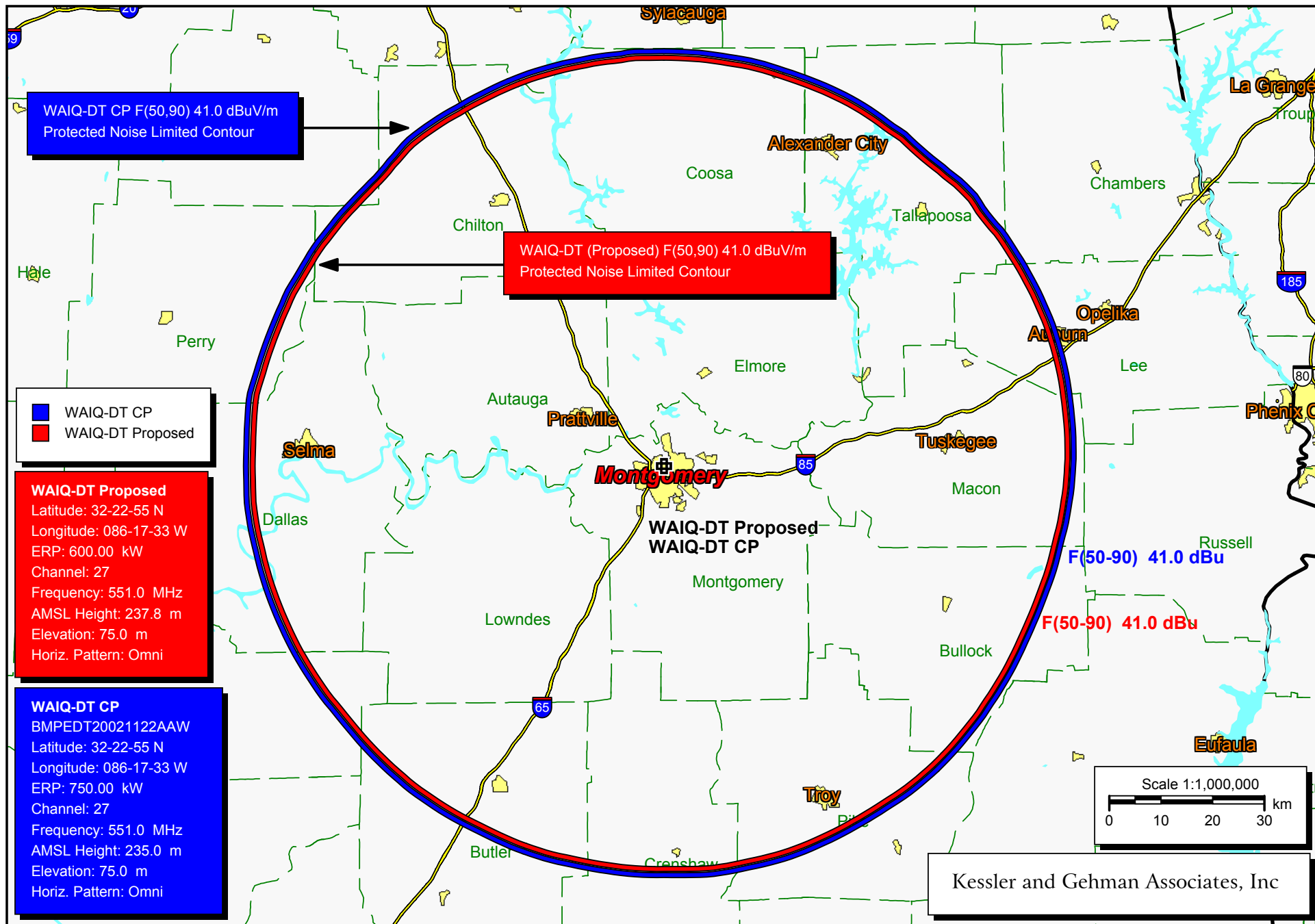
Elevation Pattern Drawing #: **36G28507D-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.026	2.4	0.373	10.6	0.091	30.5	0.025	51.0	0.031	71.5	0.004
-9.5	0.037	2.6	0.305	10.8	0.080	31.0	0.026	51.5	0.040	72.0	0.010
-9.0	0.071	2.8	0.251	11.0	0.067	31.5	0.019	52.0	0.046	72.5	0.015
-8.5	0.091	3.0	0.210	11.5	0.040	32.0	0.007	52.5	0.046	73.0	0.020
-8.0	0.070	3.2	0.182	12.0	0.029	32.5	0.007	53.0	0.039	73.5	0.022
-7.5	0.022	3.4	0.162	12.5	0.028	33.0	0.011	53.5	0.029	74.0	0.024
-7.0	0.029	3.6	0.150	13.0	0.040	33.5	0.008	54.0	0.019	74.5	0.023
-6.5	0.025	3.8	0.143	13.5	0.054	34.0	0.000	54.5	0.013	75.0	0.022
-6.0	0.036	4.0	0.141	14.0	0.056	34.5	0.005	55.0	0.011	75.5	0.019
-5.5	0.092	4.2	0.140	14.5	0.046	35.0	0.004	55.5	0.011	76.0	0.016
-5.0	0.101	4.4	0.139	15.0	0.034	35.5	0.002	56.0	0.014	76.5	0.014
-4.5	0.042	4.6	0.137	15.5	0.030	36.0	0.010	56.5	0.021	77.0	0.014
-4.0	0.050	4.8	0.133	16.0	0.032	36.5	0.013	57.0	0.029	77.5	0.015
-3.5	0.102	5.0	0.128	16.5	0.036	37.0	0.009	57.5	0.034	78.0	0.018
-3.0	0.063	5.2	0.122	17.0	0.031	37.5	0.007	58.0	0.036	78.5	0.021
-2.8	0.026	5.4	0.117	17.5	0.014	38.0	0.020	58.5	0.032	79.0	0.025
-2.6	0.030	5.6	0.113	18.0	0.012	38.5	0.030	59.0	0.025	79.5	0.028
-2.4	0.078	5.8	0.111	18.5	0.027	39.0	0.032	59.5	0.015	80.0	0.030
-2.2	0.122	6.0	0.110	19.0	0.027	39.5	0.027	60.0	0.006	80.5	0.032
-2.0	0.154	6.2	0.110	19.5	0.013	40.0	0.018	60.5	0.007	81.0	0.033
-1.8	0.168	6.4	0.112	20.0	0.002	40.5	0.010	61.0	0.011	81.5	0.033
-1.6	0.162	6.6	0.115	20.5	0.007	41.0	0.007	61.5	0.011	82.0	0.033
-1.4	0.139	6.8	0.118	21.0	0.003	41.5	0.006	62.0	0.007	82.5	0.032
-1.2	0.125	7.0	0.121	21.5	0.007	42.0	0.008	62.5	0.005	83.0	0.030
-1.0	0.166	7.2	0.122	22.0	0.010	42.5	0.011	63.0	0.012	83.5	0.028
-0.8	0.262	7.4	0.123	22.5	0.012	43.0	0.012	63.5	0.020	84.0	0.026
-0.6	0.387	7.6	0.122	23.0	0.030	43.5	0.009	64.0	0.026	84.5	0.024
-0.4	0.523	7.8	0.120	23.5	0.046	44.0	0.005	64.5	0.030	85.0	0.021
-0.2	0.657	8.0	0.118	24.0	0.048	44.5	0.006	65.0	0.029	85.5	0.019
0.0	0.779	8.2	0.116	24.5	0.037	45.0	0.007	65.5	0.024	86.0	0.016
0.2	0.880	8.4	0.114	25.0	0.019	45.5	0.009	66.0	0.017	86.5	0.013
0.4	0.952	8.6	0.113	25.5	0.009	46.0	0.016	66.5	0.008	87.0	0.011
0.6	0.993	8.8	0.114	26.0	0.009	46.5	0.024	67.0	0.002	87.5	0.008
0.8	0.999	9.0	0.114	26.5	0.005	47.0	0.029	67.5	0.010	88.0	0.006
1.0	0.973	9.2	0.116	27.0	0.009	47.5	0.030	68.0	0.016	88.5	0.004
1.2	0.919	9.4	0.117	27.5	0.013	48.0	0.025	68.5	0.021	89.0	0.002
1.4	0.842	9.6	0.117	28.0	0.011	48.5	0.018	69.0	0.022	89.5	0.001
1.6	0.750	9.8	0.116	28.5	0.008	49.0	0.013	69.5	0.021	90.0	0.000
1.8	0.650	10.0	0.114	29.0	0.008	49.5	0.013	70.0	0.017		
2.0	0.550	10.2	0.109	29.5	0.010	50.0	0.015	70.5	0.011		
2.2	0.456	10.4	0.101	30.0	0.018	50.5	0.021	71.0	0.005		









WAIQ-DT CP F(50,90) 41.0 dBuV/m (blue) vs. WAIQ-DT Proposed F(50,90) 41.0 dBuV/m (red)

## WAIQ-DT Channel 27 (CP) Distance to Contour Tabulation

Call Letters: WAIQ-DT CP  
 File Number: BMPEDT20021122AAW  
 Latitude: 32-22-55 N  
 Longitude: 086-17-33 W  
 ERP: 750.00 kW  
 Channel: 27  
 Frequency: 551.0 MHz  
 AMSL Height: 235.0 m  
 Elevation: 75.0 m  
 Horiz. Antenna Pattern: Omni  
 Type of contour: FCC  
 Location Variability: 50.0 %  
 Time Variability: 90.0 %  
 # of Radials Calculated: 360  
 Field Strength: 41.00 dBuV/m  
 Primary Terrain: 3 Second US Terrain

Bearing (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	80.2	184.0
1.0	80.2	183.9
2.0	80.2	183.9
3.0	80.1	183.8
4.0	80.2	183.9
5.0	80.2	184.1
6.0	80.2	183.8
7.0	80.1	183.4
8.0	80.1	183.2
9.0	80.1	183.0
10.0	80.1	183.2
11.0	80.1	183.5
12.0	80.1	183.8
13.0	80.1	183.4
14.0	80.1	183.2
15.0	80.0	182.4
16.0	80.0	181.7
17.0	79.9	181.3
18.0	79.9	181.0
19.0	79.9	180.8
20.0	79.9	180.8
21.0	79.9	180.7
22.0	79.9	180.6
23.0	79.9	180.8
24.0	79.8	180.4
25.0	79.8	180.3
26.0	79.8	180.1
27.0	79.8	179.8
28.0	79.7	179.2
29.0	79.7	178.7
30.0	79.6	177.8
31.0	79.5	176.9
32.0	79.4	175.8
33.0	79.3	174.5
34.0	79.2	173.9
35.0	79.3	174.4
36.0	79.3	174.7
37.0	79.1	172.7

# WAIQ-DT Channel 27 (CP) Distance to Contour Tabulation

38.0	79.0	171.1
39.0	78.9	170.3
40.0	78.9	169.8
41.0	78.9	170.0
42.0	79.0	171.0
43.0	79.1	172.2
44.0	79.1	172.8
45.0	79.3	174.5
46.0	79.5	176.7
47.0	79.6	177.5
48.0	79.7	178.3
49.0	79.7	178.8
50.0	79.5	176.9
51.0	79.3	174.7
52.0	79.3	174.2
53.0	79.3	174.5
54.0	79.4	175.5
55.0	79.6	177.4
56.0	79.6	177.9
57.0	79.6	178.0
58.0	79.6	177.9
59.0	79.6	178.1
60.0	79.7	178.6
61.0	79.7	179.0
62.0	79.7	179.2
63.0	79.8	179.5
64.0	79.8	180.0
65.0	79.8	180.4
66.0	79.9	180.5
67.0	79.9	180.5
68.0	79.9	180.8
69.0	79.9	181.5
70.0	80.0	181.7
71.0	79.9	181.1
72.0	79.9	180.7
73.0	79.9	180.6
74.0	79.8	180.3
75.0	79.8	180.1
76.0	79.8	179.9
77.0	79.8	179.6
78.0	79.7	179.0
79.0	79.6	178.2
80.0	79.6	177.4
81.0	79.5	176.8
82.0	79.5	176.3
83.0	79.4	175.9
84.0	79.4	175.6
85.0	79.4	175.2
86.0	79.3	174.8
87.0	79.3	174.1
88.0	79.2	173.6
89.0	79.2	173.1
90.0	79.1	172.2
91.0	79.0	171.4
92.0	78.9	170.6
93.0	78.9	170.0
94.0	78.8	169.2

# WAIQ-DT Channel 27 (CP) Distance to Contour Tabulation

95.0	78.7	167.8
96.0	78.6	167.0
97.0	78.5	166.1
98.0	78.5	165.4
99.0	78.4	164.2
100.0	78.2	162.7
101.0	78.1	161.7
102.0	78.1	161.3
103.0	78.1	161.0
104.0	78.0	160.6
105.0	78.0	160.2
106.0	77.9	159.6
107.0	77.9	158.6
108.0	77.8	157.9
109.0	77.7	157.4
110.0	77.7	157.1
111.0	77.7	156.8
112.0	77.7	156.6
113.0	77.7	156.4
114.0	77.6	156.4
115.0	77.7	156.5
116.0	77.7	156.9
117.0	77.7	157.5
118.0	77.8	157.9
119.0	77.8	158.4
120.0	77.9	159.1
121.0	78.0	159.8
122.0	78.0	160.2
123.0	78.0	160.5
124.0	78.1	161.1
125.0	78.1	161.5
126.0	78.1	161.9
127.0	78.2	162.7
128.0	78.3	164.1
129.0	78.4	164.5
130.0	78.4	164.8
131.0	78.5	165.3
132.0	78.5	165.9
133.0	78.6	166.8
134.0	78.7	167.6
135.0	78.7	168.1
136.0	78.8	168.7
137.0	78.8	169.3
138.0	78.9	169.8
139.0	78.9	170.1
140.0	78.9	170.2
141.0	78.9	170.5
142.0	79.0	170.7
143.0	79.0	170.8
144.0	78.9	170.6
145.0	78.9	170.1
146.0	78.9	169.6
147.0	78.8	169.4
148.0	78.8	169.5
149.0	78.9	169.6
150.0	78.9	169.9
151.0	78.9	170.3

# WAIQ-DT Channel 27 (CP) Distance to Contour Tabulation

152.0	78.9	170.4
153.0	79.0	171.0
154.0	79.0	171.5
155.0	79.1	171.9
156.0	79.1	172.3
157.0	79.1	172.8
158.0	79.2	173.3
159.0	79.2	173.9
160.0	79.3	174.4
161.0	79.3	174.8
162.0	79.4	175.2
163.0	79.4	175.3
164.0	79.4	175.3
165.0	79.4	175.1
166.0	79.3	174.9
167.0	79.3	174.8
168.0	79.3	174.5
169.0	79.3	174.7
170.0	79.4	175.1
171.0	79.4	175.5
172.0	79.4	175.6
173.0	79.4	175.9
174.0	79.4	175.4
175.0	79.3	174.7
176.0	79.2	173.9
177.0	79.2	173.0
178.0	79.1	172.4
179.0	79.1	172.0
180.0	79.0	171.7
181.0	79.1	172.1
182.0	79.1	172.2
183.0	79.1	172.3
184.0	79.1	172.4
185.0	79.1	172.4
186.0	79.1	172.2
187.0	79.1	172.0
188.0	79.1	171.9
189.0	79.1	171.8
190.0	79.1	171.9
191.0	79.1	171.8
192.0	79.1	172.0
193.0	79.1	172.1
194.0	79.1	172.5
195.0	79.2	173.4
196.0	79.2	173.9
197.0	79.3	174.2
198.0	79.3	174.2
199.0	79.3	174.3
200.0	79.3	174.3
201.0	79.3	174.4
202.0	79.3	174.3
203.0	79.3	173.9
204.0	79.2	173.8
205.0	79.2	173.5
206.0	79.2	173.3
207.0	79.2	173.3
208.0	79.2	173.6

# WAIQ-DT Channel 27 (CP) Distance to Contour Tabulation

209.0	79.3	174.1
210.0	79.3	174.6
211.0	79.4	175.0
212.0	79.4	175.3
213.0	79.4	175.6
214.0	79.4	175.7
215.0	79.4	175.8
216.0	79.5	176.1
217.0	79.5	176.7
218.0	79.5	176.9
219.0	79.5	176.8
220.0	79.5	176.3
221.0	79.5	176.2
222.0	79.5	176.2
223.0	79.4	176.0
224.0	79.4	175.9
225.0	79.4	175.7
226.0	79.4	175.7
227.0	79.4	175.5
228.0	79.4	175.4
229.0	79.4	175.1
230.0	79.3	174.9
231.0	79.3	175.0
232.0	79.4	175.3
233.0	79.4	175.6
234.0	79.5	176.2
235.0	79.6	177.7
236.0	79.7	178.6
237.0	79.7	179.0
238.0	79.8	179.4
239.0	79.8	180.0
240.0	79.9	180.7
241.0	79.9	181.2
242.0	80.0	181.8
243.0	80.0	182.6
244.0	80.1	183.1
245.0	80.1	183.4
246.0	80.1	183.7
247.0	80.2	184.1
248.0	80.2	184.6
249.0	80.3	185.1
250.0	80.3	185.6
251.0	80.4	186.1
252.0	80.4	186.6
253.0	80.4	187.0
254.0	80.5	187.3
255.0	80.5	187.6
256.0	80.5	188.0
257.0	80.5	188.1
258.0	80.6	188.3
259.0	80.6	188.7
260.0	80.7	189.6
261.0	80.8	190.4
262.0	80.8	190.9
263.0	80.8	191.3
264.0	80.9	191.8
265.0	80.9	192.1

# WAIQ-DT Channel 27 (CP) Distance to Contour Tabulation

266.0	80.9	191.5
267.0	80.8	190.9
268.0	80.8	190.5
269.0	80.8	190.5
270.0	80.8	190.6
271.0	80.8	190.6
272.0	80.8	190.5
273.0	80.8	190.7
274.0	80.9	191.5
275.0	80.9	192.0
276.0	81.0	192.7
277.0	81.1	193.6
278.0	81.1	194.5
279.0	81.2	195.5
280.0	81.2	195.5
281.0	81.1	194.0
282.0	80.9	192.3
283.0	80.8	191.0
284.0	80.7	190.2
285.0	80.7	189.5
286.0	80.6	188.8
287.0	80.5	187.9
288.0	80.5	187.3
289.0	80.4	186.5
290.0	80.3	185.9
291.0	80.3	185.5
292.0	80.3	184.9
293.0	80.2	184.3
294.0	80.2	184.7
295.0	80.2	184.4
296.0	80.1	182.9
297.0	80.0	181.6
298.0	79.9	180.8
299.0	79.8	180.1
300.0	79.8	179.8
301.0	79.8	179.9
302.0	79.8	179.5
303.0	79.7	178.6
304.0	79.6	177.3
305.0	79.5	176.3
306.0	79.4	175.5
307.0	79.4	175.1
308.0	79.3	174.4
309.0	79.2	173.3
310.0	79.1	172.1
311.0	79.0	171.4
312.0	79.0	170.8
313.0	78.9	170.2
314.0	78.9	170.2
315.0	78.9	169.8
316.0	79.0	170.7
317.0	79.1	172.1
318.0	79.3	174.7
319.0	79.5	176.4
320.0	79.7	179.0
321.0	80.0	181.7
322.0	80.1	183.3



## WAIQ-DT Channel 27 (CP) Distance to Contour Tabulation

323.0	80.1	183.8
324.0	80.2	183.9
325.0	80.2	183.9
326.0	80.2	183.9
327.0	80.2	183.9
328.0	80.2	183.9
329.0	80.1	183.3
330.0	80.1	182.8
331.0	80.1	183.2
332.0	80.1	183.6
333.0	80.1	183.6
334.0	80.1	183.6
335.0	80.2	183.9
336.0	80.2	184.3
337.0	80.2	184.6
338.0	80.3	184.9
339.0	80.3	185.2
340.0	80.3	185.4
341.0	80.3	185.5
342.0	80.3	185.4
343.0	80.3	185.1
344.0	80.3	184.9
345.0	80.2	184.8
346.0	80.2	184.7
347.0	80.2	184.3
348.0	80.2	184.0
349.0	80.2	183.9
350.0	80.2	184.3
351.0	80.2	184.2
352.0	80.2	184.0
353.0	80.1	183.5
354.0	80.1	183.5
355.0	80.3	184.9
356.0	80.3	185.5
357.0	80.2	184.7
358.0	80.2	184.1
359.0	80.2	184.0

Average HAAT for radials shown: 177.0 m

## WAIQ-DT Channel 27 (Proposed) Distance to Contour Tabulation

Call Letters: WAIQ-DT (Proposed)  
 Latitude: 32-22-55 N  
 Longitude: 086-17-33 W  
 ERP: 600.00 kW  
 Channel: 27  
 Frequency: 551.0 MHz  
 AMSL Height: 237.8 m  
 Elevation: 75.0 m  
 Horiz. Antenna Pattern: Omni  
 Type of contour: FCC  
 Location Variability: 50.0 %  
 Time Variability: 90.0 %  
 # of Radials Calculated: 360  
 Field Strength: 41.00 dBuV/m  
 Primary Terrain: 3 Second US Terrain

Bearing (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	78.9	186.8
1.0	78.9	186.7
2.0	78.9	186.7
3.0	78.9	186.6
4.0	78.9	186.7
5.0	78.9	186.9
6.0	78.9	186.6
7.0	78.9	186.2
8.0	78.9	186.0
9.0	78.8	185.8
10.0	78.8	186.0
11.0	78.9	186.3
12.0	78.9	186.6
13.0	78.9	186.2
14.0	78.9	186.0
15.0	78.8	185.2
16.0	78.7	184.5
17.0	78.7	184.1
18.0	78.7	183.8
19.0	78.7	183.6
20.0	78.6	183.6
21.0	78.6	183.5
22.0	78.6	183.4
23.0	78.7	183.6
24.0	78.6	183.2
25.0	78.6	183.1
26.0	78.6	182.9
27.0	78.6	182.6
28.0	78.5	182.0
29.0	78.5	181.5
30.0	78.4	180.6
31.0	78.3	179.7
32.0	78.2	178.6
33.0	78.1	177.3
34.0	78.1	176.7
35.0	78.1	177.2
36.0	78.1	177.5
37.0	78.0	175.5
38.0	77.8	173.9

# WAIQ-DT Channel 27 (Proposed) Distance to Contour Tabulation

39.0	77.8	173.1
40.0	77.7	172.6
41.0	77.7	172.8
42.0	77.8	173.8
43.0	77.9	175.0
44.0	78.0	175.6
45.0	78.1	177.3
46.0	78.3	179.5
47.0	78.4	180.3
48.0	78.4	181.1
49.0	78.5	181.6
50.0	78.3	179.7
51.0	78.1	177.5
52.0	78.1	177.0
53.0	78.1	177.3
54.0	78.2	178.3
55.0	78.4	180.2
56.0	78.4	180.7
57.0	78.4	180.8
58.0	78.4	180.7
59.0	78.4	180.9
60.0	78.5	181.4
61.0	78.5	181.8
62.0	78.5	182.0
63.0	78.5	182.3
64.0	78.6	182.8
65.0	78.6	183.2
66.0	78.6	183.3
67.0	78.6	183.3
68.0	78.6	183.6
69.0	78.7	184.3
70.0	78.7	184.5
71.0	78.7	183.9
72.0	78.6	183.5
73.0	78.6	183.4
74.0	78.6	183.1
75.0	78.6	182.9
76.0	78.6	182.7
77.0	78.5	182.4
78.0	78.5	181.8
79.0	78.4	181.0
80.0	78.4	180.2
81.0	78.3	179.6
82.0	78.3	179.1
83.0	78.2	178.7
84.0	78.2	178.4
85.0	78.2	178.0
86.0	78.1	177.6
87.0	78.1	176.9
88.0	78.0	176.4
89.0	78.0	175.9
90.0	77.9	175.0
91.0	77.8	174.2
92.0	77.8	173.4
93.0	77.7	172.8
94.0	77.7	172.0
95.0	77.5	170.6

# WAIQ-DT Channel 27 (Proposed) Distance to Contour Tabulation

96.0	77.5	169.8
97.0	77.4	168.9
98.0	77.3	168.2
99.0	77.2	167.0
100.0	77.1	165.5
101.0	77.0	164.5
102.0	77.0	164.1
103.0	76.9	163.8
104.0	76.9	163.4
105.0	76.9	163.0
106.0	76.8	162.4
107.0	76.7	161.4
108.0	76.7	160.7
109.0	76.6	160.2
110.0	76.6	159.9
111.0	76.6	159.6
112.0	76.6	159.4
113.0	76.5	159.2
114.0	76.5	159.2
115.0	76.5	159.3
116.0	76.6	159.7
117.0	76.6	160.3
118.0	76.7	160.7
119.0	76.7	161.2
120.0	76.8	161.9
121.0	76.8	162.6
122.0	76.9	163.0
123.0	76.9	163.3
124.0	76.9	163.9
125.0	77.0	164.3
126.0	77.0	164.7
127.0	77.1	165.5
128.0	77.2	166.9
129.0	77.2	167.3
130.0	77.3	167.6
131.0	77.3	168.1
132.0	77.4	168.7
133.0	77.4	169.6
134.0	77.5	170.4
135.0	77.6	170.9
136.0	77.6	171.5
137.0	77.7	172.1
138.0	77.7	172.6
139.0	77.7	172.9
140.0	77.7	173.0
141.0	77.8	173.3
142.0	77.8	173.5
143.0	77.8	173.6
144.0	77.8	173.4
145.0	77.7	172.9
146.0	77.7	172.4
147.0	77.7	172.2
148.0	77.7	172.3
149.0	77.7	172.4
150.0	77.7	172.7
151.0	77.8	173.1
152.0	77.8	173.2

# WAIQ-DT Channel 27 (Proposed) Distance to Contour Tabulation

153.0	77.8	173.8
154.0	77.9	174.3
155.0	77.9	174.7
156.0	77.9	175.1
157.0	78.0	175.6
158.0	78.0	176.1
159.0	78.1	176.7
160.0	78.1	177.2
161.0	78.1	177.6
162.0	78.2	178.0
163.0	78.2	178.1
164.0	78.2	178.1
165.0	78.2	177.9
166.0	78.1	177.7
167.0	78.1	177.6
168.0	78.1	177.3
169.0	78.1	177.5
170.0	78.2	177.9
171.0	78.2	178.3
172.0	78.2	178.4
173.0	78.2	178.7
174.0	78.2	178.2
175.0	78.1	177.5
176.0	78.1	176.7
177.0	78.0	175.8
178.0	77.9	175.2
179.0	77.9	174.8
180.0	77.9	174.5
181.0	77.9	174.9
182.0	77.9	175.0
183.0	77.9	175.1
184.0	77.9	175.2
185.0	77.9	175.2
186.0	77.9	175.0
187.0	77.9	174.8
188.0	77.9	174.7
189.0	77.9	174.6
190.0	77.9	174.7
191.0	77.9	174.6
192.0	77.9	174.8
193.0	77.9	174.9
194.0	77.9	175.3
195.0	78.0	176.2
196.0	78.1	176.7
197.0	78.1	177.0
198.0	78.1	177.0
199.0	78.1	177.1
200.0	78.1	177.1
201.0	78.1	177.2
202.0	78.1	177.1
203.0	78.1	176.7
204.0	78.1	176.6
205.0	78.0	176.3
206.0	78.0	176.1
207.0	78.0	176.1
208.0	78.0	176.4
209.0	78.1	176.9

# WAIQ-DT Channel 27 (Proposed) Distance to Contour Tabulation

210.0	78.1	177.4
211.0	78.2	177.8
212.0	78.2	178.1
213.0	78.2	178.4
214.0	78.2	178.5
215.0	78.2	178.6
216.0	78.3	178.9
217.0	78.3	179.5
218.0	78.3	179.7
219.0	78.3	179.6
220.0	78.3	179.1
221.0	78.3	179.0
222.0	78.3	179.0
223.0	78.2	178.8
224.0	78.2	178.7
225.0	78.2	178.5
226.0	78.2	178.5
227.0	78.2	178.3
228.0	78.2	178.2
229.0	78.2	177.9
230.0	78.1	177.7
231.0	78.2	177.8
232.0	78.2	178.1
233.0	78.2	178.4
234.0	78.3	179.0
235.0	78.4	180.5
236.0	78.5	181.4
237.0	78.5	181.8
238.0	78.5	182.2
239.0	78.6	182.8
240.0	78.6	183.5
241.0	78.7	184.0
242.0	78.7	184.6
243.0	78.8	185.4
244.0	78.8	185.9
245.0	78.9	186.2
246.0	78.9	186.5
247.0	78.9	186.9
248.0	79.0	187.4
249.0	79.0	187.9
250.0	79.1	188.4
251.0	79.1	188.9
252.0	79.1	189.4
253.0	79.2	189.8
254.0	79.2	190.1
255.0	79.2	190.4
256.0	79.3	190.8
257.0	79.3	190.9
258.0	79.3	191.1
259.0	79.3	191.5
260.0	79.4	192.4
261.0	79.5	193.2
262.0	79.5	193.7
263.0	79.6	194.1
264.0	79.6	194.6
265.0	79.6	194.9
266.0	79.6	194.3

# WAIQ-DT Channel 27 (Proposed) Distance to Contour Tabulation

267.0	79.5	193.7
268.0	79.5	193.3
269.0	79.5	193.3
270.0	79.5	193.4
271.0	79.5	193.4
272.0	79.5	193.3
273.0	79.5	193.5
274.0	79.6	194.3
275.0	79.6	194.8
276.0	79.7	195.5
277.0	79.7	196.4
278.0	79.8	197.3
279.0	79.9	198.3
280.0	79.9	198.3
281.0	79.8	196.8
282.0	79.6	195.1
283.0	79.5	193.8
284.0	79.5	193.0
285.0	79.4	192.3
286.0	79.3	191.6
287.0	79.3	190.7
288.0	79.2	190.1
289.0	79.1	189.3
290.0	79.1	188.7
291.0	79.0	188.3
292.0	79.0	187.7
293.0	78.9	187.1
294.0	79.0	187.5
295.0	79.0	187.2
296.0	78.8	185.7
297.0	78.7	184.4
298.0	78.6	183.6
299.0	78.6	182.9
300.0	78.6	182.6
301.0	78.6	182.7
302.0	78.5	182.3
303.0	78.5	181.4
304.0	78.4	180.1
305.0	78.3	179.1
306.0	78.2	178.3
307.0	78.2	177.9
308.0	78.1	177.2
309.0	78.0	176.1
310.0	77.9	174.9
311.0	77.8	174.2
312.0	77.8	173.6
313.0	77.7	173.0
314.0	77.7	173.0
315.0	77.7	172.6
316.0	77.8	173.5
317.0	77.9	174.9
318.0	78.1	177.5
319.0	78.3	179.2
320.0	78.5	181.8
321.0	78.7	184.5
322.0	78.9	186.1
323.0	78.9	186.6

# WAIQ-DT Channel 27 (Proposed) Distance to Contour Tabulation

324.0	78.9	186.7
325.0	78.9	186.7
326.0	78.9	186.7
327.0	78.9	186.7
328.0	78.9	186.7
329.0	78.9	186.1
330.0	78.8	185.6
331.0	78.9	186.0
332.0	78.9	186.4
333.0	78.9	186.4
334.0	78.9	186.4
335.0	78.9	186.7
336.0	78.9	187.1
337.0	79.0	187.4
338.0	79.0	187.7
339.0	79.0	188.0
340.0	79.0	188.2
341.0	79.1	188.3
342.0	79.0	188.2
343.0	79.0	187.9
344.0	79.0	187.7
345.0	79.0	187.6
346.0	79.0	187.5
347.0	78.9	187.1
348.0	78.9	186.8
349.0	78.9	186.7
350.0	78.9	187.1
351.0	78.9	187.0
352.0	78.9	186.8
353.0	78.9	186.3
354.0	78.9	186.3
355.0	79.0	187.7
356.0	79.1	188.3
357.0	79.0	187.5
358.0	78.9	186.9
359.0	78.9	186.8

Average HAAT for radials shown: 179.8 m



**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

<b>Radial</b>	<b>WAIQ-DT CP distance to contours (km)</b>	<b>WAIQ-DT Proposed distance to contours (km)</b>	<b>PASS OR FAIL</b>	<b>Difference (km)</b>
0.0	80.2	78.9	PASS	1.3
1.0	80.2	78.9	PASS	1.3
2.0	80.2	78.9	PASS	1.3
3.0	80.1	78.9	PASS	1.2
4.0	80.2	78.9	PASS	1.3
5.0	80.2	78.9	PASS	1.3
6.0	80.2	78.9	PASS	1.3
7.0	80.1	78.9	PASS	1.2
8.0	80.1	78.9	PASS	1.2
9.0	80.1	78.8	PASS	1.3
10.0	80.1	78.8	PASS	1.3
11.0	80.1	78.9	PASS	1.2
12.0	80.1	78.9	PASS	1.2
13.0	80.1	78.9	PASS	1.2
14.0	80.1	78.9	PASS	1.2
15.0	80.0	78.8	PASS	1.2
16.0	80.0	78.7	PASS	1.3
17.0	79.9	78.7	PASS	1.2
18.0	79.9	78.7	PASS	1.2
19.0	79.9	78.7	PASS	1.2
20.0	79.9	78.6	PASS	1.3
21.0	79.9	78.6	PASS	1.3
22.0	79.9	78.6	PASS	1.3
23.0	79.9	78.7	PASS	1.2
24.0	79.8	78.6	PASS	1.2
25.0	79.8	78.6	PASS	1.2
26.0	79.8	78.6	PASS	1.2
27.0	79.8	78.6	PASS	1.2
28.0	79.7	78.5	PASS	1.2
29.0	79.7	78.5	PASS	1.2
30.0	79.6	78.4	PASS	1.2
31.0	79.5	78.3	PASS	1.2
32.0	79.4	78.2	PASS	1.2
33.0	79.3	78.1	PASS	1.2
34.0	79.2	78.1	PASS	1.1
35.0	79.3	78.1	PASS	1.2
36.0	79.3	78.1	PASS	1.2
37.0	79.1	78.0	PASS	1.1
38.0	79.0	77.8	PASS	1.2

**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

39.0	78.9	77.8	PASS	1.1
40.0	78.9	77.7	PASS	1.2
41.0	78.9	77.7	PASS	1.2
42.0	79.0	77.8	PASS	1.2
43.0	79.1	77.9	PASS	1.2
44.0	79.1	78.0	PASS	1.1
45.0	79.3	78.1	PASS	1.2
46.0	79.5	78.3	PASS	1.2
47.0	79.6	78.4	PASS	1.2
48.0	79.7	78.4	PASS	1.3
49.0	79.7	78.5	PASS	1.2
50.0	79.5	78.3	PASS	1.2
51.0	79.3	78.1	PASS	1.2
52.0	79.3	78.1	PASS	1.2
53.0	79.3	78.1	PASS	1.2
54.0	79.4	78.2	PASS	1.2
55.0	79.6	78.4	PASS	1.2
56.0	79.6	78.4	PASS	1.2
57.0	79.6	78.4	PASS	1.2
58.0	79.6	78.4	PASS	1.2
59.0	79.6	78.4	PASS	1.2
60.0	79.7	78.5	PASS	1.2
61.0	79.7	78.5	PASS	1.2
62.0	79.7	78.5	PASS	1.2
63.0	79.8	78.5	PASS	1.3
64.0	79.8	78.6	PASS	1.2
65.0	79.8	78.6	PASS	1.2
66.0	79.9	78.6	PASS	1.3
67.0	79.9	78.6	PASS	1.3
68.0	79.9	78.6	PASS	1.3
69.0	79.9	78.7	PASS	1.2
70.0	80.0	78.7	PASS	1.3
71.0	79.9	78.7	PASS	1.2
72.0	79.9	78.6	PASS	1.3
73.0	79.9	78.6	PASS	1.3
74.0	79.8	78.6	PASS	1.2
75.0	79.8	78.6	PASS	1.2
76.0	79.8	78.6	PASS	1.2
77.0	79.8	78.5	PASS	1.3
78.0	79.7	78.5	PASS	1.2
79.0	79.6	78.4	PASS	1.2
80.0	79.6	78.4	PASS	1.2

**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

81.0	79.5	78.3	PASS	1.2
82.0	79.5	78.3	PASS	1.2
83.0	79.4	78.2	PASS	1.2
84.0	79.4	78.2	PASS	1.2
85.0	79.4	78.2	PASS	1.2
86.0	79.3	78.1	PASS	1.2
87.0	79.3	78.1	PASS	1.2
88.0	79.2	78.0	PASS	1.2
89.0	79.2	78.0	PASS	1.2
90.0	79.1	77.9	PASS	1.2
91.0	79.0	77.8	PASS	1.2
92.0	78.9	77.8	PASS	1.1
93.0	78.9	77.7	PASS	1.2
94.0	78.8	77.7	PASS	1.1
95.0	78.7	77.5	PASS	1.2
96.0	78.6	77.5	PASS	1.1
97.0	78.5	77.4	PASS	1.1
98.0	78.5	77.3	PASS	1.2
99.0	78.4	77.2	PASS	1.2
100.0	78.2	77.1	PASS	1.1
101.0	78.1	77.0	PASS	1.1
102.0	78.1	77.0	PASS	1.1
103.0	78.1	76.9	PASS	1.2
104.0	78.0	76.9	PASS	1.1
105.0	78.0	76.9	PASS	1.1
106.0	77.9	76.8	PASS	1.1
107.0	77.9	76.7	PASS	1.2
108.0	77.8	76.7	PASS	1.1
109.0	77.7	76.6	PASS	1.1
110.0	77.7	76.6	PASS	1.1
111.0	77.7	76.6	PASS	1.1
112.0	77.7	76.6	PASS	1.1
113.0	77.7	76.5	PASS	1.2
114.0	77.6	76.5	PASS	1.1
115.0	77.7	76.5	PASS	1.2
116.0	77.7	76.6	PASS	1.1
117.0	77.7	76.6	PASS	1.1
118.0	77.8	76.7	PASS	1.1
119.0	77.8	76.7	PASS	1.1
120.0	77.9	76.8	PASS	1.1
121.0	78.0	76.8	PASS	1.2
122.0	78.0	76.9	PASS	1.1

**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

123.0	78.0	76.9	PASS	1.1
124.0	78.1	76.9	PASS	1.2
125.0	78.1	77.0	PASS	1.1
126.0	78.1	77.0	PASS	1.1
127.0	78.2	77.1	PASS	1.1
128.0	78.3	77.2	PASS	1.1
129.0	78.4	77.2	PASS	1.2
130.0	78.4	77.3	PASS	1.1
131.0	78.5	77.3	PASS	1.2
132.0	78.5	77.4	PASS	1.1
133.0	78.6	77.4	PASS	1.2
134.0	78.7	77.5	PASS	1.2
135.0	78.7	77.6	PASS	1.1
136.0	78.8	77.6	PASS	1.2
137.0	78.8	77.7	PASS	1.1
138.0	78.9	77.7	PASS	1.2
139.0	78.9	77.7	PASS	1.2
140.0	78.9	77.7	PASS	1.2
141.0	78.9	77.8	PASS	1.1
142.0	79.0	77.8	PASS	1.2
143.0	79.0	77.8	PASS	1.2
144.0	78.9	77.8	PASS	1.1
145.0	78.9	77.7	PASS	1.2
146.0	78.9	77.7	PASS	1.2
147.0	78.8	77.7	PASS	1.1
148.0	78.8	77.7	PASS	1.1
149.0	78.9	77.7	PASS	1.2
150.0	78.9	77.7	PASS	1.2
151.0	78.9	77.8	PASS	1.1
152.0	78.9	77.8	PASS	1.1
153.0	79.0	77.8	PASS	1.2
154.0	79.0	77.9	PASS	1.1
155.0	79.1	77.9	PASS	1.2
156.0	79.1	77.9	PASS	1.2
157.0	79.1	78.0	PASS	1.1
158.0	79.2	78.0	PASS	1.2
159.0	79.2	78.1	PASS	1.1
160.0	79.3	78.1	PASS	1.2
161.0	79.3	78.1	PASS	1.2
162.0	79.4	78.2	PASS	1.2
163.0	79.4	78.2	PASS	1.2
164.0	79.4	78.2	PASS	1.2

**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

165.0	79.4	78.2	PASS	1.2
166.0	79.3	78.1	PASS	1.2
167.0	79.3	78.1	PASS	1.2
168.0	79.3	78.1	PASS	1.2
169.0	79.3	78.1	PASS	1.2
170.0	79.4	78.2	PASS	1.2
171.0	79.4	78.2	PASS	1.2
172.0	79.4	78.2	PASS	1.2
173.0	79.4	78.2	PASS	1.2
174.0	79.4	78.2	PASS	1.2
175.0	79.3	78.1	PASS	1.2
176.0	79.2	78.1	PASS	1.1
177.0	79.2	78.0	PASS	1.2
178.0	79.1	77.9	PASS	1.2
179.0	79.1	77.9	PASS	1.2
180.0	79.0	77.9	PASS	1.1
181.0	79.1	77.9	PASS	1.2
182.0	79.1	77.9	PASS	1.2
183.0	79.1	77.9	PASS	1.2
184.0	79.1	77.9	PASS	1.2
185.0	79.1	77.9	PASS	1.2
186.0	79.1	77.9	PASS	1.2
187.0	79.1	77.9	PASS	1.2
188.0	79.1	77.9	PASS	1.2
189.0	79.1	77.9	PASS	1.2
190.0	79.1	77.9	PASS	1.2
191.0	79.1	77.9	PASS	1.2
192.0	79.1	77.9	PASS	1.2
193.0	79.1	77.9	PASS	1.2
194.0	79.1	77.9	PASS	1.2
195.0	79.2	78.0	PASS	1.2
196.0	79.2	78.1	PASS	1.1
197.0	79.3	78.1	PASS	1.2
198.0	79.3	78.1	PASS	1.2
199.0	79.3	78.1	PASS	1.2
200.0	79.3	78.1	PASS	1.2
201.0	79.3	78.1	PASS	1.2
202.0	79.3	78.1	PASS	1.2
203.0	79.3	78.1	PASS	1.2
204.0	79.2	78.1	PASS	1.1
205.0	79.2	78.0	PASS	1.2
206.0	79.2	78.0	PASS	1.2

**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

207.0	79.2	78.0	PASS	1.2
208.0	79.2	78.0	PASS	1.2
209.0	79.3	78.1	PASS	1.2
210.0	79.3	78.1	PASS	1.2
211.0	79.4	78.2	PASS	1.2
212.0	79.4	78.2	PASS	1.2
213.0	79.4	78.2	PASS	1.2
214.0	79.4	78.2	PASS	1.2
215.0	79.4	78.2	PASS	1.2
216.0	79.5	78.3	PASS	1.2
217.0	79.5	78.3	PASS	1.2
218.0	79.5	78.3	PASS	1.2
219.0	79.5	78.3	PASS	1.2
220.0	79.5	78.3	PASS	1.2
221.0	79.5	78.3	PASS	1.2
222.0	79.5	78.3	PASS	1.2
223.0	79.4	78.2	PASS	1.2
224.0	79.4	78.2	PASS	1.2
225.0	79.4	78.2	PASS	1.2
226.0	79.4	78.2	PASS	1.2
227.0	79.4	78.2	PASS	1.2
228.0	79.4	78.2	PASS	1.2
229.0	79.4	78.2	PASS	1.2
230.0	79.3	78.1	PASS	1.2
231.0	79.3	78.2	PASS	1.1
232.0	79.4	78.2	PASS	1.2
233.0	79.4	78.2	PASS	1.2
234.0	79.5	78.3	PASS	1.2
235.0	79.6	78.4	PASS	1.2
236.0	79.7	78.5	PASS	1.2
237.0	79.7	78.5	PASS	1.2
238.0	79.8	78.5	PASS	1.3
239.0	79.8	78.6	PASS	1.2
240.0	79.9	78.6	PASS	1.3
241.0	79.9	78.7	PASS	1.2
242.0	80.0	78.7	PASS	1.3
243.0	80.0	78.8	PASS	1.2
244.0	80.1	78.8	PASS	1.3
245.0	80.1	78.9	PASS	1.2
246.0	80.1	78.9	PASS	1.2
247.0	80.2	78.9	PASS	1.3
248.0	80.2	79.0	PASS	1.2

**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

249.0	80.3	79.0	PASS	1.3
250.0	80.3	79.1	PASS	1.2
251.0	80.4	79.1	PASS	1.3
252.0	80.4	79.1	PASS	1.3
253.0	80.4	79.2	PASS	1.2
254.0	80.5	79.2	PASS	1.3
255.0	80.5	79.2	PASS	1.3
256.0	80.5	79.3	PASS	1.2
257.0	80.5	79.3	PASS	1.2
258.0	80.6	79.3	PASS	1.3
259.0	80.6	79.3	PASS	1.3
260.0	80.7	79.4	PASS	1.3
261.0	80.8	79.5	PASS	1.3
262.0	80.8	79.5	PASS	1.3
263.0	80.8	79.6	PASS	1.2
264.0	80.9	79.6	PASS	1.3
265.0	80.9	79.6	PASS	1.3
266.0	80.9	79.6	PASS	1.3
267.0	80.8	79.5	PASS	1.3
268.0	80.8	79.5	PASS	1.3
269.0	80.8	79.5	PASS	1.3
270.0	80.8	79.5	PASS	1.3
271.0	80.8	79.5	PASS	1.3
272.0	80.8	79.5	PASS	1.3
273.0	80.8	79.5	PASS	1.3
274.0	80.9	79.6	PASS	1.3
275.0	80.9	79.6	PASS	1.3
276.0	81.0	79.7	PASS	1.3
277.0	81.1	79.7	PASS	1.4
278.0	81.1	79.8	PASS	1.3
279.0	81.2	79.9	PASS	1.3
280.0	81.2	79.9	PASS	1.3
281.0	81.1	79.8	PASS	1.3
282.0	80.9	79.6	PASS	1.3
283.0	80.8	79.5	PASS	1.3
284.0	80.7	79.5	PASS	1.2
285.0	80.7	79.4	PASS	1.3
286.0	80.6	79.3	PASS	1.3
287.0	80.5	79.3	PASS	1.2
288.0	80.5	79.2	PASS	1.3
289.0	80.4	79.1	PASS	1.3
290.0	80.3	79.1	PASS	1.2

**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

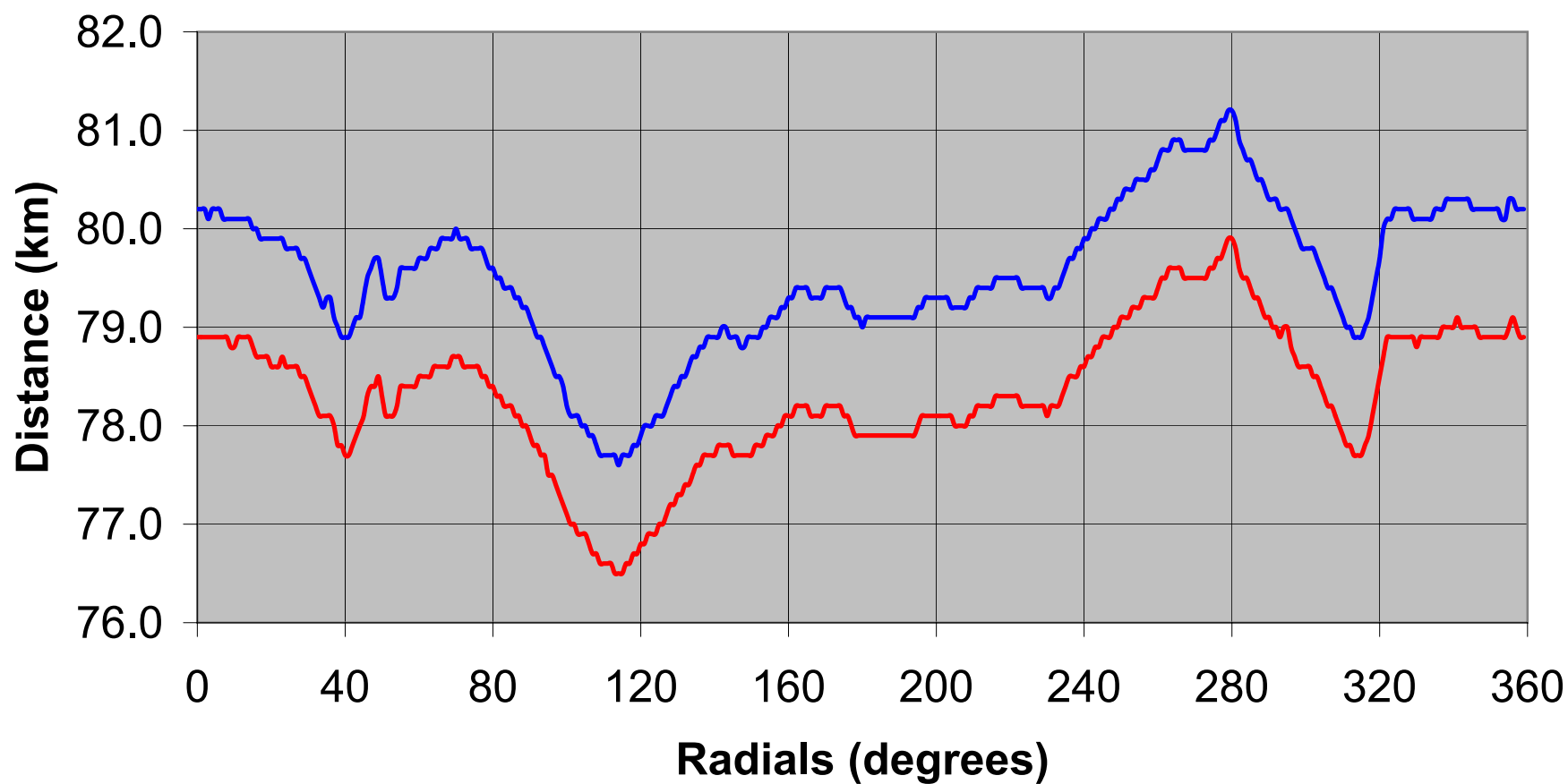
291.0	80.3	79.0	PASS	1.3
292.0	80.3	79.0	PASS	1.3
293.0	80.2	78.9	PASS	1.3
294.0	80.2	79.0	PASS	1.2
295.0	80.2	79.0	PASS	1.2
296.0	80.1	78.8	PASS	1.3
297.0	80.0	78.7	PASS	1.3
298.0	79.9	78.6	PASS	1.3
299.0	79.8	78.6	PASS	1.2
300.0	79.8	78.6	PASS	1.2
301.0	79.8	78.6	PASS	1.2
302.0	79.8	78.5	PASS	1.3
303.0	79.7	78.5	PASS	1.2
304.0	79.6	78.4	PASS	1.2
305.0	79.5	78.3	PASS	1.2
306.0	79.4	78.2	PASS	1.2
307.0	79.4	78.2	PASS	1.2
308.0	79.3	78.1	PASS	1.2
309.0	79.2	78.0	PASS	1.2
310.0	79.1	77.9	PASS	1.2
311.0	79.0	77.8	PASS	1.2
312.0	79.0	77.8	PASS	1.2
313.0	78.9	77.7	PASS	1.2
314.0	78.9	77.7	PASS	1.2
315.0	78.9	77.7	PASS	1.2
316.0	79.0	77.8	PASS	1.2
317.0	79.1	77.9	PASS	1.2
318.0	79.3	78.1	PASS	1.2
319.0	79.5	78.3	PASS	1.2
320.0	79.7	78.5	PASS	1.2
321.0	80.0	78.7	PASS	1.3
322.0	80.1	78.9	PASS	1.2
323.0	80.1	78.9	PASS	1.2
324.0	80.2	78.9	PASS	1.3
325.0	80.2	78.9	PASS	1.3
326.0	80.2	78.9	PASS	1.3
327.0	80.2	78.9	PASS	1.3
328.0	80.2	78.9	PASS	1.3
329.0	80.1	78.9	PASS	1.2
330.0	80.1	78.8	PASS	1.3
331.0	80.1	78.9	PASS	1.2
332.0	80.1	78.9	PASS	1.2



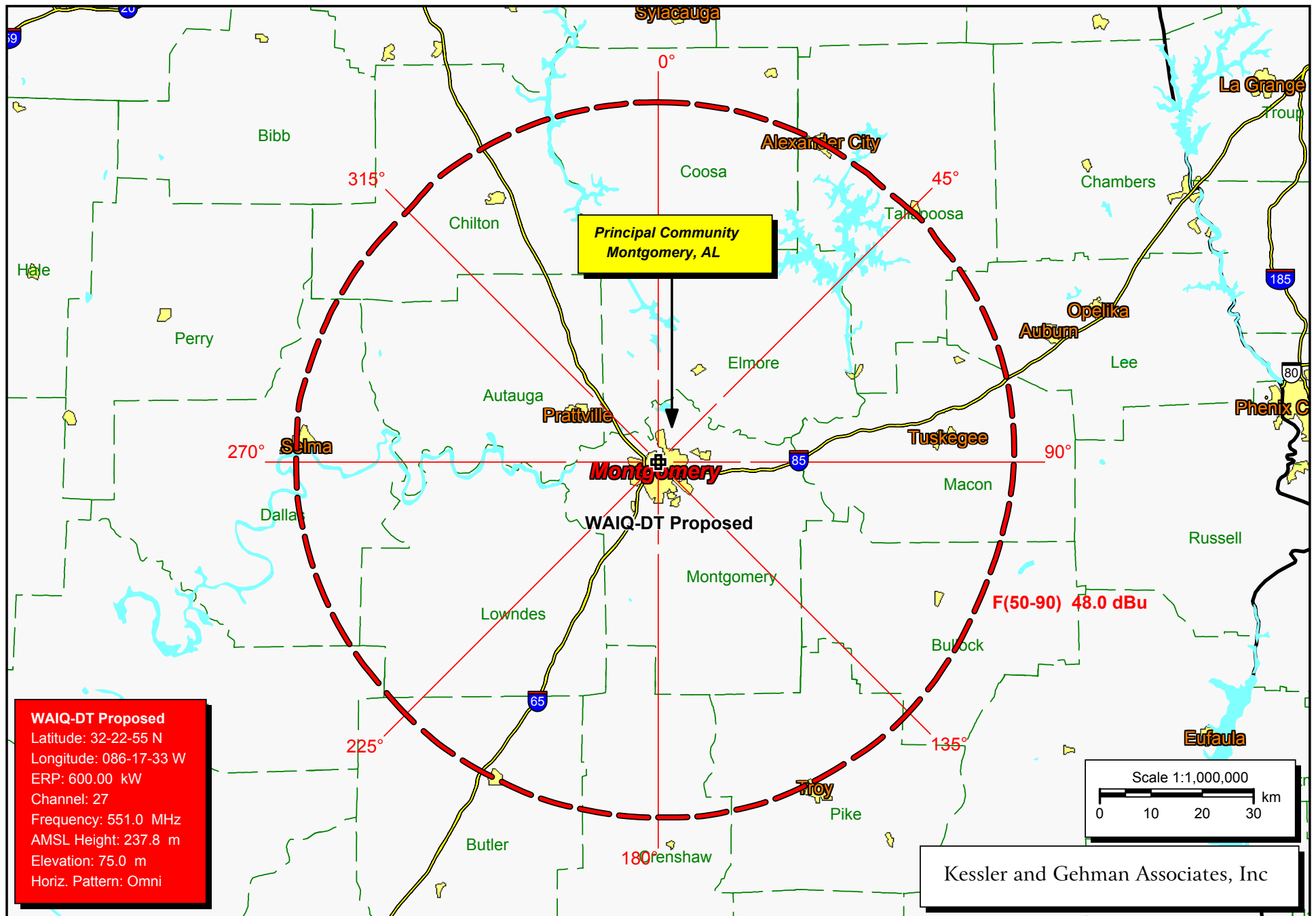
**WAIQ-DT (CP vs. Proposed) Distance to Contour Comparison Spreadsheet**

333.0	80.1	78.9	PASS	1.2
334.0	80.1	78.9	PASS	1.2
335.0	80.2	78.9	PASS	1.3
336.0	80.2	78.9	PASS	1.3
337.0	80.2	79.0	PASS	1.2
338.0	80.3	79.0	PASS	1.3
339.0	80.3	79.0	PASS	1.3
340.0	80.3	79.0	PASS	1.3
341.0	80.3	79.1	PASS	1.2
342.0	80.3	79.0	PASS	1.3
343.0	80.3	79.0	PASS	1.3
344.0	80.3	79.0	PASS	1.3
345.0	80.2	79.0	PASS	1.2
346.0	80.2	79.0	PASS	1.2
347.0	80.2	78.9	PASS	1.3
348.0	80.2	78.9	PASS	1.3
349.0	80.2	78.9	PASS	1.3
350.0	80.2	78.9	PASS	1.3
351.0	80.2	78.9	PASS	1.3
352.0	80.2	78.9	PASS	1.3
353.0	80.1	78.9	PASS	1.2
354.0	80.1	78.9	PASS	1.2
355.0	80.3	79.0	PASS	1.3
356.0	80.3	79.1	PASS	1.2
357.0	80.2	79.0	PASS	1.2
358.0	80.2	78.9	PASS	1.3
359.0	80.2	78.9	PASS	1.3

## Distance to Contour Comparison Chart



— WAIQ-DT CP distance to contours (km)  
— WAIQ-DT Proposed distance to contours (km)



WAIQ-DT Proposed F(50,90) 48.0 dBuV/m Principal Community Contour