

**WKLX
MINOR MODIFICATION**

The application requests an increase in ERP to 22 kW for WKLX on 264C2.

Allocation analysis:

The NED 30 meter second terrain data (51 points method) are used throughout except for 7.5 minute topographic map terrain data used for WUBT radials 23, 24, 25 and 26 degrees True. The following exhibits are provided:

E1	WKLX spacing study
E1AA	WUBT licensed facility analysis
E1AB	WUBT maximum class analysis
E1B	WBDC maximum class analysis
E1C	WUSY maximum class interference plot
E2	70 dBu service to Brownsville
E3	ASR

Exhibits E1 and E1AA-E1C demonstrate that the proposed facility meets Commission spacing and/ or 73.215 contour overlap requirements. Interference analyses or plots for WUBT, WBDC and WUSY are provided as E1AA-E1C. Exhibit E2 demonstrates that the proposed facility will encompass Brownsville, KY with a 70 dBu contour. The 60 dBu contour for 22 kw at 184 meters HAAT is 48.6 km which is greater than the minimum and less than the maximum 52.0 km for a C2.

HAAT and Distance to Contour: (3-16 km, 51 points Method - NED 30 Meter Terrain)

N. Latitude = 37-09-19 W. Longitude = 86-19-33

Azi. AVG EL HAAT ERP kW Field 70-F50 60-F50

000	176.3	182.7	22.0000	1.000	29.47	48.52
045	168.6	190.4	22.0000	1.000	30.04	49.17
090	188.1	170.9	22.0000	1.000	28.59	47.39
135	188.3	170.7	22.0000	1.000	28.57	47.37
180	178.1	180.9	22.0000	1.000	29.34	48.37
225	185.0	174.0	22.0000	1.000	28.82	47.71
270	158.3	200.7	22.0000	1.000	30.83	50.01
315	159.8	199.2	22.0000	1.000	30.71	49.89

Ave El= 175.33 M HAAT= 183.67 M AMSL= 359 M

WUBT FMOVER analysis:

Clearance to WUBT's 266C1 licensed facility (47 kW@ 393 meters HAAT and 613 meters RCAMSL) is demonstrated in E1AA.

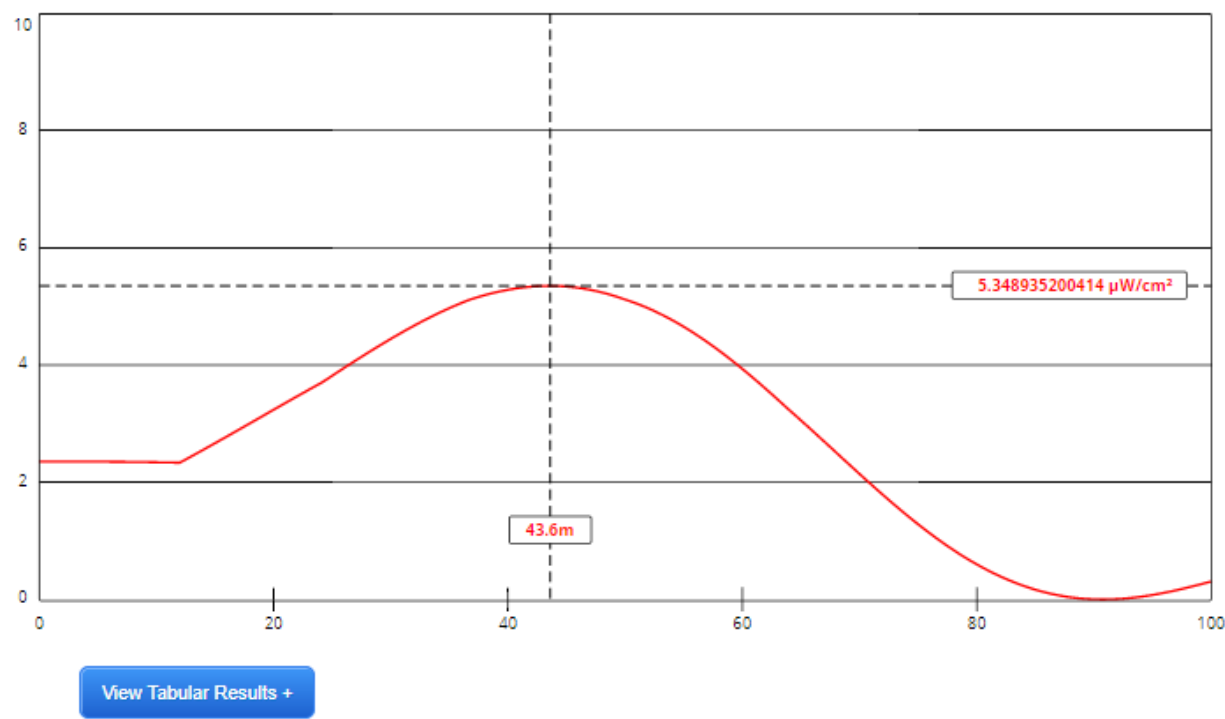
However, since WUBT is licensed at greater than 299 meters HAAT, it must be analyzed at maximum class facilities of 100 kW and 299 meters HAAT. This is accomplished by using its licensed 393 meters HAAT and 613 meter AMSL radiation center adjusted to 299 meters HAAT and 100 kW ERP yielding a radiation center of 519 meters AMSL for the maximum class facility.

An FMOVER analysis utilizing NED 30 meter terrain is included in exhibit E1AB for all azimuths except 23, 24, 25 and 26 degrees True which are analyzed manually using 7.5 minute topographic map terrain data (see E1AA-1-4) and a careful manual interpolation of the WUBT 60 dBu and WKLX 100 dBu contours directly from §73.333, Figure 1. The curve values were rounded to 0.1 km in accordance with their maximum obtainable accuracy and in accordance with the procedures prescribed by §73.313. Map terrain data and the §73.313 full scale curves (attached) are preferred over computerized terrain data and contour values based on curve sample points. The maximum class analysis uses the adjusted WKLX ERP at the 2.1 degree depression angles in accordance with §73.313(c)(2). The manual FMOVER analysis at 23, 24, 25 and 26 degrees demonstrates that there is no overlap of the WKLX 100 dBu contour and the WUBT MAXIMUM CLASS 60 dBu.

Antenna and RF calculation:

The WKLX facility will utilize an ERI LPX-6AC full wavelength spaced, circularly polarized antenna mounted at 139 meters AGL. The RF contribution of the facility was calculated using the Commission's FMMODEL program to be 5.4 $\mu\text{W}/\text{cm}^2$ or 2.7% of the maximum permissible for general public exposure, and less than the 5% requiring consideration. The FMMODEL output is included in this report.

FMMODEL output:



Channel Selection	Channel 264 (100.7 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	<input type="text" value="139"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="22000"/>	ERP-V (W)	<input type="text" value="22000"/>
Num of Elements	<input type="text" value="6"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	

E1 CHANNEL STUDY

REFERENCE		DISPLAY DATES
37 09 19.0 N.	CLASS = C2	DATA 08-25-17
86 19 33.0 W.	Current Spacings to 3rd Adj.	SEARCH 08-25-17
----- Channel 264 - 100.7 MHz -----		

Call	Channel	Location		Azi	Dist	FCC	Margin
-----	-----	-----	-----	-----	-----	-----	-----
WKLX	CP -N 264C2	Brownsville	KY	0.0	0.00	189.5	-189.5
WKLX	LIC-N 264C2	Brownsville	KY	0.0	0.00	189.5	-189.5
WBDC	LIC 265B1	Huntingburg	IN	336.8	127.40	133.5	-6.1

73.215 elected. See E1B for maximum class analysis.

WUSY	LIC 264C0	Cleveland	TN	156.4	235.52	238.5	-3.0
------	-----------	-----------	----	-------	--------	-------	------

73.215 elected. See E1C maximum class interference plot.

WUBT	LIC 266C1	Russellville	KY	204.8	76.84	78.5	-1.7
------	-----------	--------------	----	-------	-------	------	------

73.215 elected. See E1AA and E1AB for licensed and maximum class analyses.

WLSK	LIC-N 265A	Lebanon	KY	55.7	107.44	105.5	1.9
WLGX	LIC 263C2	Louisville	KY	31.3	135.12	129.5	5.6
WANY-FM	LIC-N 265A	Albany	KY	115.6	116.39	105.5	10.9
WJCR-FM	LIC 211C1	Upton	KY	40.2	40.39	26.5	13.9
WCYO	CP 264C3	Irvine	KY	73.1	200.61	176.5	24.1
WCYO	LIC-N 264C3	Irvine	KY	73.0	200.77	176.5	24.3

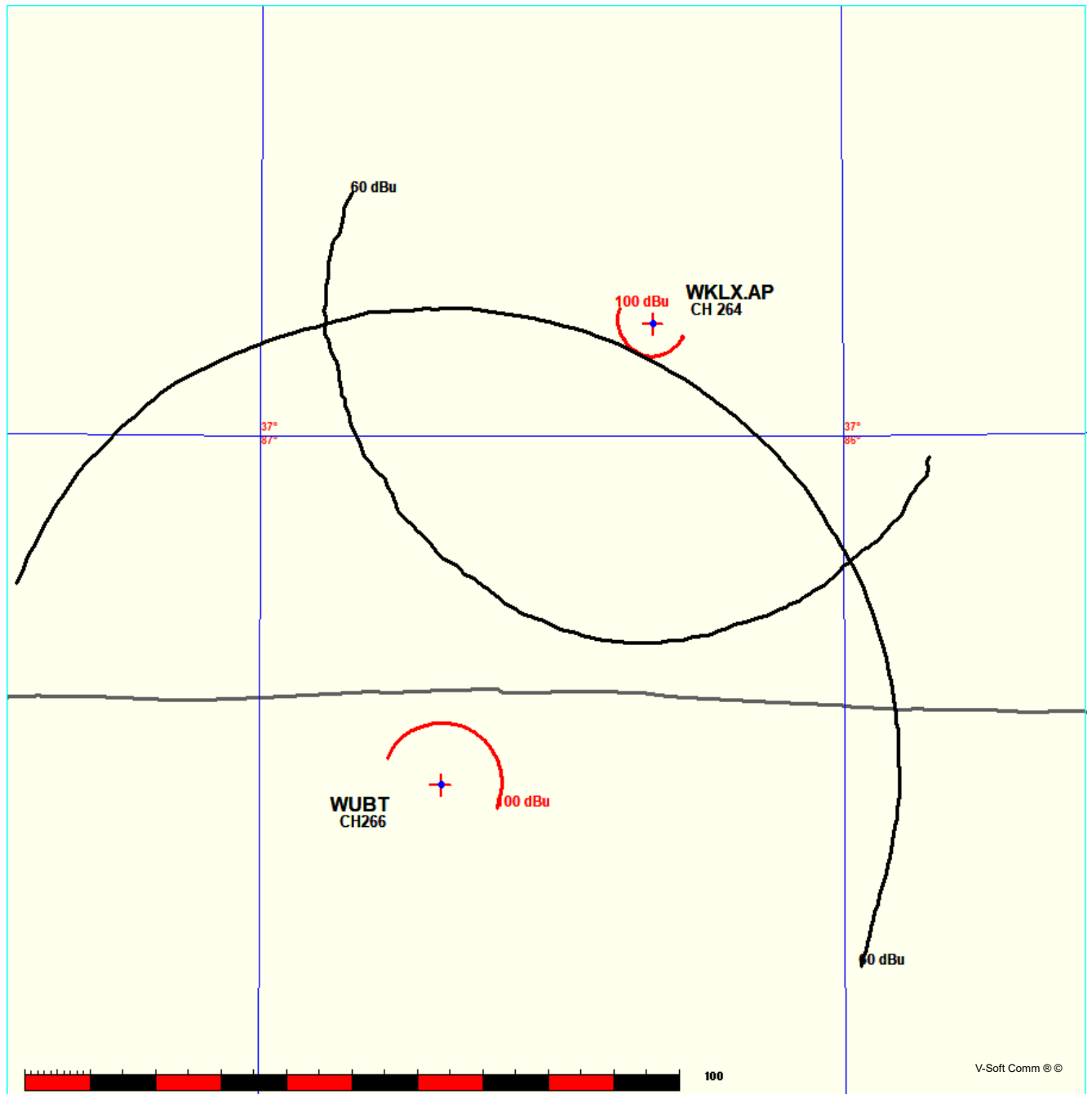
All separation margins include rounding.

E1AA WKLX-WUBT LICENSED PLOT

FMCommander Single Allocation Study - 08-29-2017 - NED 30 Meter

WKLX.AP CH 264 C2 73.215 N
Lat= 37 09 19.0, Lng= 86 19 33.0
22.0 kW 183.7 m HAAT, 359 m COR
Prot.= 60 dBu, Intef.= 100 dBu

WUBT CH 266 C1 BLH19900328KC
Lat= 36 31 36.0, Lng= 86 41 14.0
47.0 kW 393 m HAAT, 613 m COR
Prot.= 60 dBu, Intef.= 100 dBu



E1AA-1 WUBT LICENSED FMOVER

Terrain Data: NED 30 Meter FMOver Analysis

WUBT BLH19900328KC

WKLX.AP

Channel = 266C1

Max ERP = 47 kW

RCAMSL = 613 m

N. Lat. 36 31 36.0

W. Lng. 86 41 14.0

Protected

60 dBu

Channel = 264C2

Max ERP = 22 kW

RCAMSL = 359 m

N. Lat. 37 09 19.0

W. Lng. 86 19 33.0

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
011.0	047.0000	0398.5	071.8	271.8	022.0000	0204.6	018.4	80.50	
012.0	047.0000	0398.2	071.8	271.0	022.0000	0200.5	017.1	81.34	
013.0	047.0000	0398.5	071.8	270.2	022.0000	0199.7	015.9	82.34	
014.0	047.0000	0398.2	071.8	268.9	022.0000	0202.7	014.7	83.33	
015.0	047.0000	0398.3	071.8	267.5	022.0000	0200.5	013.5	84.74	
016.0	047.0000	0398.5	071.8	265.7	022.0000	0195.4	012.3	86.21	
017.0	047.0000	0398.6	071.8	263.5	022.0000	0187.8	011.1	87.69	
018.0	047.0000	0398.8	071.8	260.6	022.0000	0182.9	010.0	89.39	
019.0	047.0000	0398.3	071.8	256.6	022.0000	0185.1	008.9	91.42	
020.0	047.0000	0398.5	071.8	251.7	022.0000	0184.5	007.9	93.39	
021.0	047.0000	0398.9	071.8	245.3	022.0000	0182.7	006.9	95.44	
022.0	047.0000	0398.2	071.7	236.6	022.0000	0172.2	006.2	96.93	
023.0	047.0000	0397.3	071.7	225.6	022.0000	0173.0	005.6	98.50	
024.0	047.0000	0396.7	071.6	212.9	022.0000	0173.1	005.3	99.38	
025.0	047.0000	0396.7	071.6	199.4	022.0000	0179.4	005.3	99.71	
026.0	047.0000	0396.4	071.6	186.6	022.0000	0182.7	005.6	98.98	
027.0	047.0000	0395.7	071.6	175.9	022.0000	0178.8	006.2	97.23	
028.0	047.0000	0394.3	071.5	167.6	022.0000	0173.3	007.0	94.92	
029.0	047.0000	0394.6	071.5	160.6	022.0000	0171.2	007.9	92.85	
030.0	047.0000	0394.6	071.5	155.3	022.0000	0172.1	008.8	90.97	

E1AB WUBT MAXIMUM CLASS FMOVER

Terrain Data: NED 30 Meter FMOver Analysis

WUBT BLH19900328KC
(^ Max Class Parameters)
Channel = 266C1
Max ERP = 100 kW
RCAMSL = 519 m
N. Lat. 36 31 36.0
W. Lng. 86 41 14.0
Protected
60 dBu

WKLX.AP

Channel = 264C2
Max ERP = 18.8 kW *
RCAMSL = 359 m
N. Lat. 37 09 19.0
W. Lng. 86 19 33.0
Interfering
100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
020.0	100.0000	0304.5	072.7	257.5	018.8000	0185.7	007.3	93.95	
021.0	100.0000	0304.9	072.8	251.4	018.8000	0185.1	006.3	96.49	
022.0	100.0000	0304.2	072.7	242.3	018.8000	0177.3	005.4	98.59	

23-26 DEGREES ANALYZED USING 7.5' TOPOGRAPHIC MAP DATA AND
MANUALLY INTERPOLATED CONTOURS FROM 73.313, FIGURE 1. SEE E1AB.

023.0	100.0000	0301.0	072.3	228.2	018.8000	0174.5	005.1	100.0	
024.0	100.0000	0300.0	072.2	214.0	018.8000	0171.5	004.8	100.0	
025.0	100.0000	0299.0	072.0	199.0	018.8000	0179.3	005.0	100.0	
026.0	100.0000	0300.8	072.3	184.0	018.8000	0183.7	005.0	100.0	
027.0	100.0000	0301.7	072.5	170.7	018.8000	0176.9	005.4	98.64	
028.0	100.0000	0300.3	072.4	162.1	018.8000	0171.6	006.3	95.86	
029.0	100.0000	0300.6	072.4	155.1	018.8000	0172.1	007.3	93.49	
030.0	100.0000	0300.6	072.4	150.1	018.8000	0171.5	008.3	91.21	

*WKLX ERP BASED ON F FACTOR AT 2.1 DEGREES DEPRESSION ANGLE (0.924).
SEE E1AB.

EXHIBIT E1AB
WUBT MAXIMUM CLASS MANUAL FMOVER ANALYSIS
(100 kW - 299 m HAAT - 519 m RCAMSL)

A manual FMOVER analysis has been conducted on the WUBT 23, 24, 25 and 26 degree True radials utilizing terrain obtained from U.S.G.S 7.5 minute topographic maps (E1AB1-4) for WUBT, HAAT for WKLX from the NED 30 meter terrain database and by obtaining the relevant 60 dBu (50:50) and 100 dBu (50:10) contours by direct manual interpolation from the full scale §73.333, Figure 1 curves rounded to 0.1 km. Since the WKLX 100 dBu contours are located below the plane of the maximum antenna lobe, the vertical elevation pattern F value for the ERI LPX-6AC antenna of 0.924 at the 2.1 degrees depression angles [Angle = INV TAN (HAAT/Distance in m to WUBT 60 dBu)] calculated at each of the four WUBT 60 dBu terminal points has been used. The adjusted WKLX ERP = 18.8 kW (22 kW X 0.924²).

§ 73.313 Prediction of coverage.

(c)(2)When predicting **field strengths** over areas **not** in the plane of the maximum main lobe, use the ERP in the direction of such areas, determined by considering the appropriate vertical radiation pattern (emphasis added).

(1) WUBT 23 degrees:

100 kW @ 301 m 60 dBu = 72.3 km².
 Terminal coordinates for WUBT 60 dBu = N 37-07-29 W 86-22-07 (FCC web tool).
 WKLX distance to WUBT 60 dBu = 5.1 km @ 228.15 degrees.
 WKLX 100 dBu for 18.8 kw @174.5 m HAAT = 4.9 km². **CLEAR 0.2 km**

(2)WUBT 24 degrees:

100 kW @ 300 m 60 dBu = 72.2 km².
 Terminal coordinates for WUBT 60 dBu = N 37-07-10 W 86-21-22 (FCC web tool).
 WKLX distance to WUBT 60 dBu = 4.8 km @ 214 degrees.
 WKLX 100 dBu for 18.8 kw @171.5 m HAAT = 4.8 km². **CLEAR 0.0 km**

(3) WUBT 25 degreee:

100 kW @ 299 m 60 dBu = 72.0 km¹.
 Terminal coordinates for WUBT 60 dBu = N 37-06-47 W 86-20-38.
 WKLX distance to WUBT 60 dBu = 5.0 km @ 198.9 degrees.
 WKLX 100 dBu for 18.8 kW @ 179.3 m HAAT = 5.0 km². **CLEAR 0.0 km**

(4) WUBT 26 degrees:

100 kW @ 300.8 m. 60 dBu = 72.3 km².
 Terminal coordinates for WUBT 60 dBu = N 37-06-38 W 86-19-47.
 WKLX distance to WUBT 60 dBu = 5.0 km @ 184 degrees.
 WKLX 100 dBu for 18.8 kW @ 183.7 meters HAAT = 5.0 km². **CLEAR 0.0 km**

¹ Determined from §73.333, Figure 1 and defined contour distance for 100 kW@299 m per §73.211.

Station class	Maximum ERP	Reference HAAT in meters (ft.)	Class contour distance in kilometers
C1	100 kW (20.0 dBk)	299 (981)	72

² All contour distances carefully interpolated from enlarged full-scale 73.333, Figure 1 graph.

EXHIBIT E1AB 1-4

WUBT HAAT USING 7.5 MINUTE TOPOGRAPHIC TERRAIN

Terrain data for the WUBT 23, 24, 25 and 26 degree True radials were obtained at 0.2 km intervals from 3 to 16 km from Orlinda, TN, Prices Mills, TN and Franklin, KY-TN 7.5 minute USGS quadrangles. The terrain was analyzed in accordance with:

§ 73.313 Prediction of coverage.

(d) The antenna height to be used with this chart is the height of the radiation center of the antenna above the average terrain along the radial in question. In determining the average elevation of the terrain, the elevations between 3 and 16 kilometers from the antenna site are used.

(3)The average elevation of the 13 kilometer distance between 3 and 16 kilometers from the antenna site should then be determined from the profile graph for each radial. This may be obtained by averaging a large number of equally spaced points, by using a planimeter, or by obtaining the median elevation (that exceeded for 50% of the distance) in sectors and averaging those values (emphasis added).

23° = 519 m RCAMSL - 218 meter average terrain = 301 m HAAT.

24° = 519 m RCAMSL - 219 meter average terrain = 300 m HAAT.

25° = 519 m RCAMSL - 220 meter average terrain = 299 m HAAT

26 ° = 519 m RCAMSL - 218.2 meter average terrain = 300.8 m HAAT.

Graphs appended to this exhibit and data appended to report. The graphs were analyzed using a Lasico L-10A planimeter

23°

800'

700'

600'

23 WUBT DEGREE RADIAL

WUBT RCAMSL = 519 M (MAX CLASS)
AVG. TERRAIN = 218 M

HAAT = 301 M

3 KM

5

7

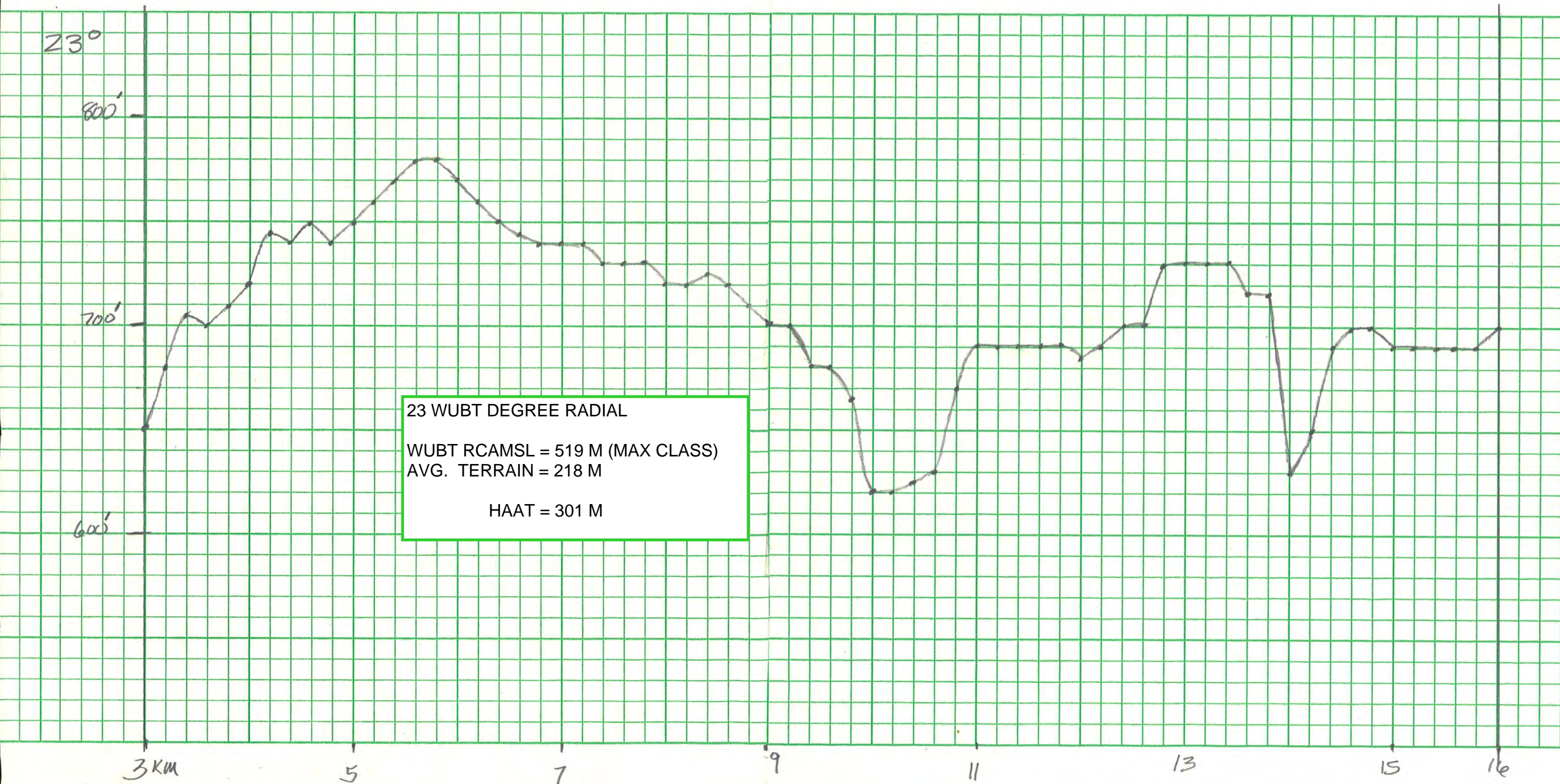
9

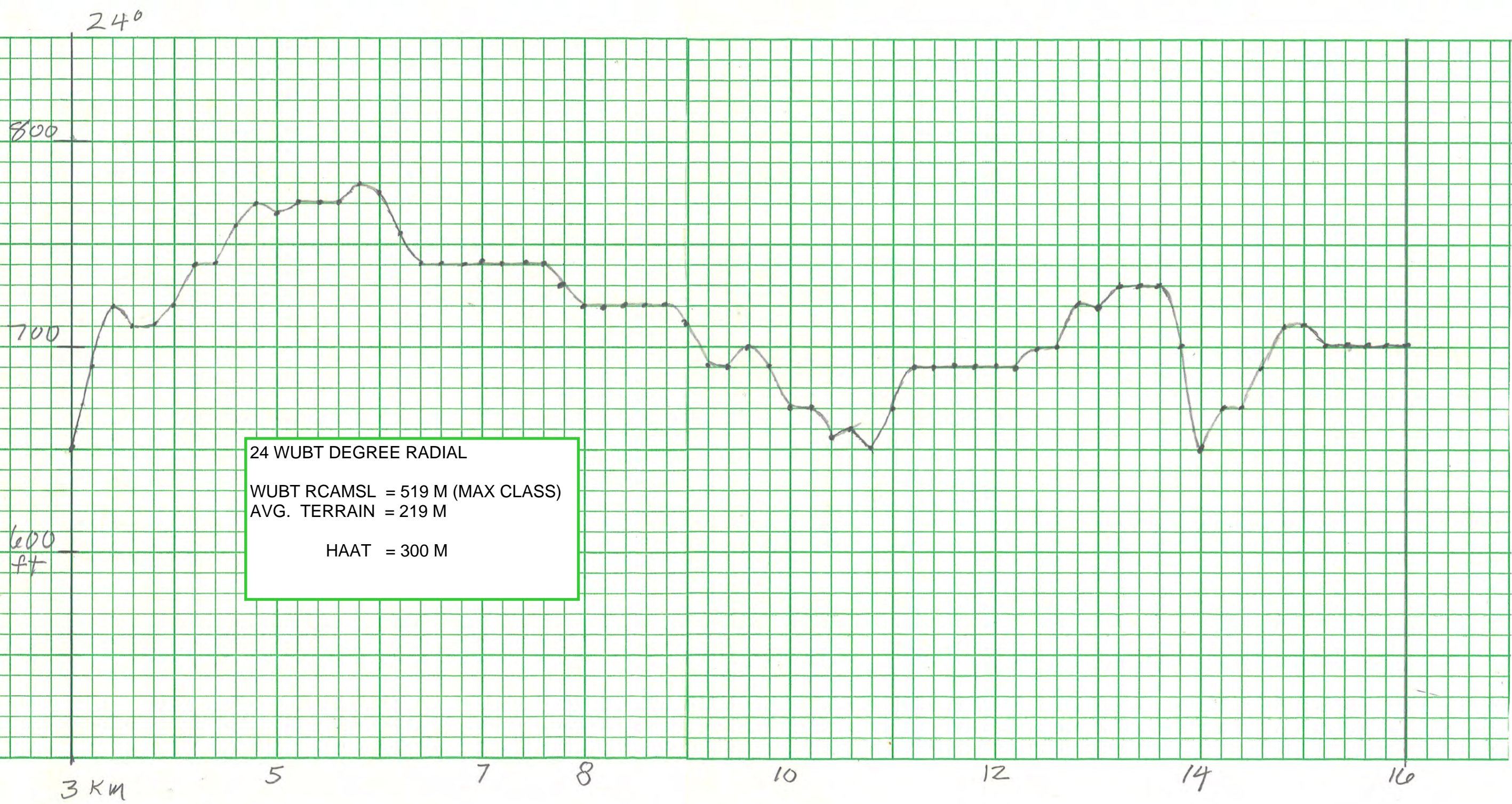
11

13

15

16





25° T

800'

700'

600'

3 KM

5

7

9

11

13

15

16

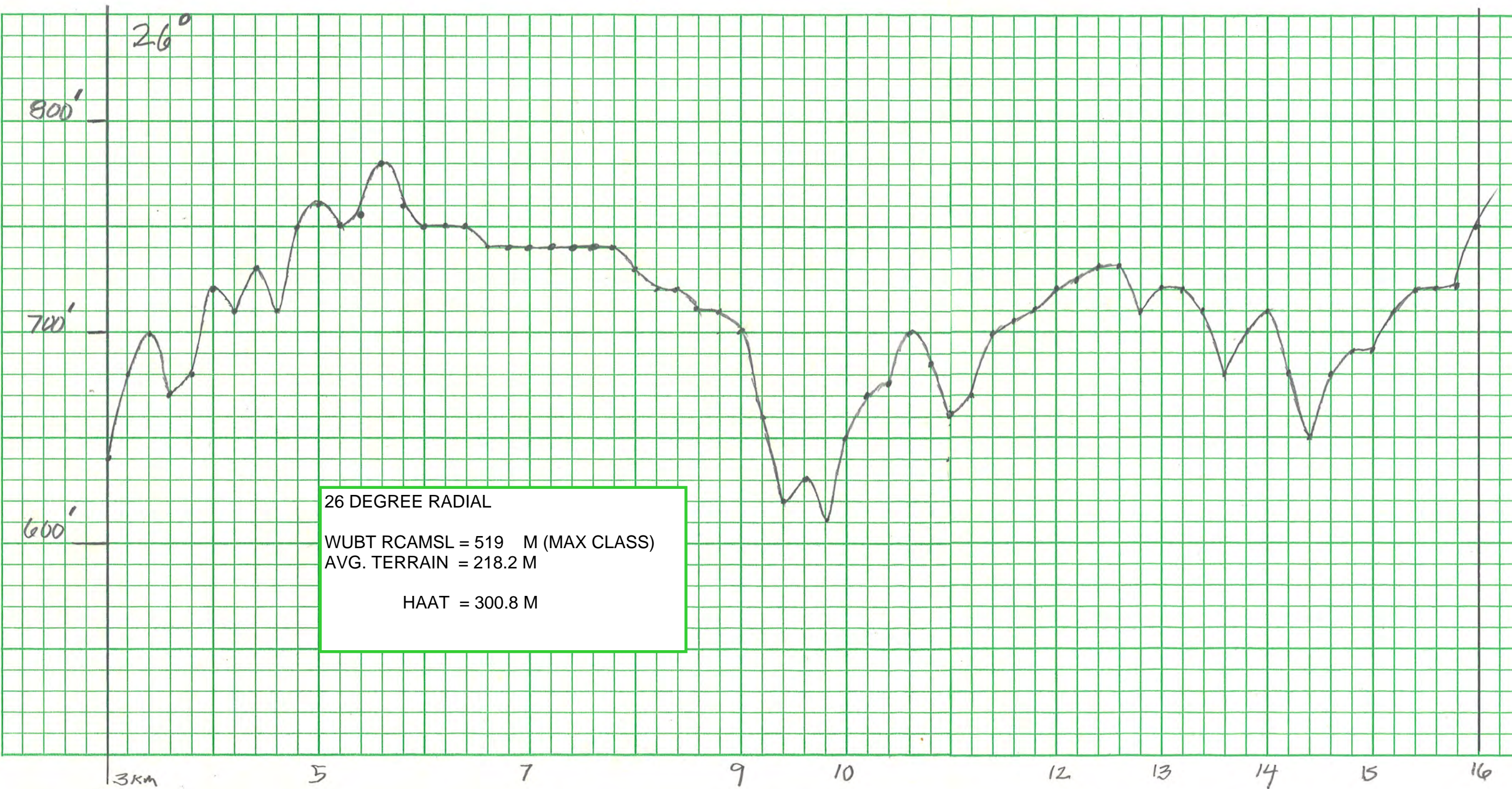
25 DEGREE WUBT RADIAL

WUBT RCAMSL = 519 M (MAX CLASS)

AVG. TERRAIN = 220 M

HAAT = 299 M

600



E1AB-5 WKLX 30 METER HAAT

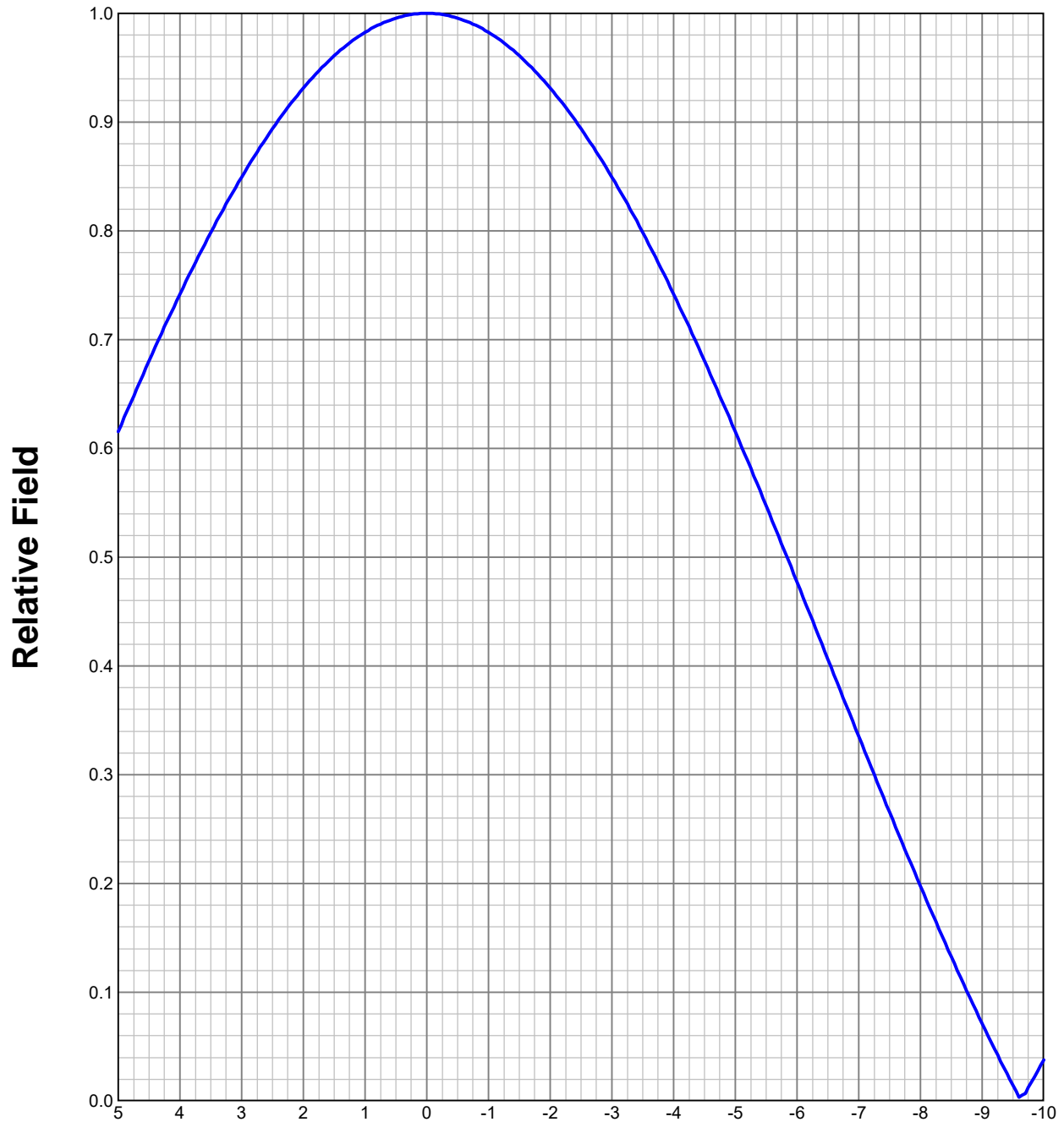
N. Lat. = 370919.0 W. Lng. = 861933.0
HAAT and Distance to Contour,
3-16 km, 51 pts Method - NED 30 Meter

WKLX.C, Charles M. Anderson, BPH20170705AAK

Azi.	AV EL	HAAT	ERP kW	Field	70-F5	60-F5
182	177.9	181.1	22.0000	1.000	29.36	48.39
183	177.2	181.8	22.0000	1.000	29.41	48.45
184	175.3	183.7	22.0000	1.000	29.55	48.61
185	175.2	183.8	22.0000	1.000	29.55	48.62
186	176.4	182.6	22.0000	1.000	29.46	48.51
187	175.8	183.2	22.0000	1.000	29.51	48.57
188	176.7	182.3	22.0000	1.000	29.44	48.49
189	175.7	183.3	22.0000	1.000	29.51	48.57
190	175.2	183.8	22.0000	1.000	29.55	48.61
191	175.3	183.7	22.0000	1.000	29.54	48.60
192	174.6	184.4	22.0000	1.000	29.60	48.67
193	175.9	183.1	22.0000	1.000	29.50	48.56
194	178.1	180.9	22.0000	1.000	29.34	48.37
195	178.7	180.3	22.0000	1.000	29.30	48.32
196	178.1	180.9	22.0000	1.000	29.34	48.37
197	177.1	181.9	22.0000	1.000	29.41	48.45
198	178.0	181.0	22.0000	1.000	29.35	48.38
199	179.7	179.3	22.0000	1.000	29.23	48.23
200	180.3	178.7	22.0000	1.000	29.18	48.17
201	180.0	179.0	22.0000	1.000	29.20	48.20
202	179.0	180.0	22.0000	1.000	29.27	48.28
203	179.0	180.0	22.0000	1.000	29.27	48.29
204	177.2	181.8	22.0000	1.000	29.41	48.45
205	177.8	181.2	22.0000	1.000	29.36	48.39
206	179.9	179.1	22.0000	1.000	29.21	48.21
207	181.2	177.8	22.0000	1.000	29.11	48.09
208	180.5	178.5	22.0000	1.000	29.16	48.15
209	182.5	176.5	22.0000	1.000	29.01	47.96
210	184.9	174.1	22.0000	1.000	28.83	47.72
211	185.6	173.4	22.0000	1.000	28.78	47.66
212	186.1	172.9	22.0000	1.000	28.75	47.61
213	185.4	173.6	22.0000	1.000	28.80	47.68
214	187.5	171.5	22.0000	1.000	28.64	47.46
215	188.9	170.1	22.0000	1.000	28.53	47.30
216	186.8	172.2	22.0000	1.000	28.69	47.53
217	184.6	174.4	22.0000	1.000	28.86	47.75
218	184.3	174.7	22.0000	1.000	28.88	47.79
219	189.1	169.9	22.0000	1.000	28.51	47.29
220	187.9	171.1	22.0000	1.000	28.61	47.41
221	185.3	173.7	22.0000	1.000	28.80	47.68
222	182.0	177.0	22.0000	1.000	29.05	48.01
223	180.8	178.2	22.0000	1.000	29.14	48.12
224	183.4	175.6	22.0000	1.000	28.95	47.88
225	185.0	174.0	22.0000	1.000	28.82	47.71
226	187.0	172.0	22.0000	1.000	28.68	47.51
227	184.6	174.4	22.0000	1.000	28.86	47.76
228	185.2	173.8	22.0000	1.000	28.81	47.69
229	181.5	177.5	22.0000	1.000	29.09	48.05
230	183.8	175.2	22.0000	1.000	28.92	47.83
231	180.7	178.3	22.0000	1.000	29.15	48.13

ELEVATION PATTERN

Type:	LPX6F		Channel:	264
Directivity:	Numeric	dBd	Location:	
Main Lobe:	3.30	5.19	Beam Tilt:	0.00
Horizontal:	3.30	5.19	Polarization:	Circular



Preliminary, subject to final design and review.

TABULATED DATA FOR ELEVATION PATTERN

Type: LPX6F

Polarization: Circular

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
5.00	0.615	-4.22	-6.75	0.371	-8.62	-27.00	0.120	-18.45	-50.50	0.161	-15.88	-74.00	0.330	-9.64
4.75	0.648	-3.76	-7.00	0.335	-9.49	-27.50	0.104	-19.67	-51.00	0.155	-16.17	-74.50	0.327	-9.71
4.50	0.681	-3.34	-7.25	0.300	-10.45	-28.00	0.086	-21.28	-51.50	0.149	-16.56	-75.00	0.324	-9.80
4.25	0.712	-2.95	-7.50	0.265	-11.52	-28.50	0.067	-23.45	-52.00	0.140	-17.07	-75.50	0.320	-9.90
4.00	0.742	-2.59	-7.75	0.231	-12.72	-29.00	0.047	-26.53	-52.50	0.130	-17.71	-76.00	0.316	-10.01
3.75	0.771	-2.26	-8.00	0.198	-14.08	-29.50	0.026	-31.55	-53.00	0.119	-18.51	-76.50	0.311	-10.13
3.50	0.799	-1.95	-8.25	0.165	-15.67	-30.00	0.006	-45.12	-53.50	0.106	-19.48	-77.00	0.307	-10.27
3.25	0.825	-1.67	-8.50	0.133	-17.55	-30.50	0.015	-36.37	-54.00	0.092	-20.69	-77.50	0.302	-10.41
3.00	0.849	-1.42	-8.75	0.101	-19.87	-31.00	0.035	-29.03	-54.50	0.078	-22.21	-78.00	0.296	-10.57
2.75	0.873	-1.18	-9.00	0.071	-22.94	-31.50	0.055	-25.26	-55.00	0.062	-24.18	-78.50	0.290	-10.74
2.50	0.894	-0.97	-9.25	0.042	-27.49	-32.00	0.073	-22.78	-55.50	0.045	-26.88	-79.00	0.284	-10.92
2.25	0.914	-0.79	-9.50	0.014	-36.88	-32.50	0.089	-21.01	-56.00	0.028	-31.01	-79.50	0.278	-11.11
2.00	0.931	-0.62	-9.75	0.012	-38.22	-33.00	0.104	-19.69	-56.50	0.010	-39.60	-80.00	0.272	-11.31
1.75	0.947	-0.47	-10.00	0.038	-28.49	-33.50	0.116	-18.69	-57.00	0.008	-42.41	-80.50	0.265	-11.52
1.50	0.961	-0.35	-10.50	0.084	-21.51	-34.00	0.127	-17.95	-57.50	0.026	-31.74	-81.00	0.259	-11.74
1.25	0.973	-0.24	-11.00	0.124	-18.10	-34.50	0.135	-17.42	-58.00	0.044	-27.06	-81.50	0.252	-11.97
1.00	0.983	-0.15	-11.50	0.159	-15.99	-35.00	0.140	-17.06	-58.50	0.063	-24.04	-82.00	0.245	-12.22
0.75	0.990	-0.09	-12.00	0.186	-14.60	-35.50	0.143	-16.87	-59.00	0.081	-21.80	-82.50	0.238	-12.47
0.50	0.996	-0.04	-12.50	0.208	-13.66	-36.00	0.144	-16.84	-59.50	0.099	-20.05	-83.00	0.231	-12.74
0.25	0.999	-0.01	-13.00	0.222	-13.06	-36.50	0.142	-16.95	-60.00	0.117	-18.61	-83.50	0.224	-13.01
0.00	1.000	0.00	-13.50	0.231	-12.74	-37.00	0.138	-17.22	-60.50	0.135	-17.40	-84.00	0.216	-13.30
-0.25	0.999	-0.01	-14.00	0.233	-12.65	-37.50	0.131	-17.64	-61.00	0.152	-16.36	-84.50	0.209	-13.60
-0.50	0.996	-0.04	-14.50	0.230	-12.78	-38.00	0.122	-18.24	-61.50	0.169	-15.46	-85.00	0.201	-13.92
-0.75	0.990	-0.09	-15.00	0.221	-13.12	-38.50	0.112	-19.03	-62.00	0.185	-14.68	-85.50	0.194	-14.24
-1.00	0.983	-0.15	-15.50	0.207	-13.66	-39.00	0.099	-20.05	-62.50	0.200	-13.99	-86.00	0.187	-14.59
-1.25	0.973	-0.24	-16.00	0.190	-14.44	-39.50	0.085	-21.37	-63.00	0.214	-13.38	-86.50	0.179	-14.94
-1.50	0.961	-0.35	-16.50	0.168	-15.47	-40.00	0.070	-23.09	-63.50	0.228	-12.83	-87.00	0.171	-15.32
-1.75	0.947	-0.47	-17.00	0.144	-16.82	-40.50	0.054	-25.40	-64.00	0.241	-12.35	-87.50	0.164	-15.71
-2.00	0.931	-0.62	-17.50	0.118	-18.58	-41.00	0.036	-28.76	-64.50	0.253	-11.92	-88.00	0.156	-16.12
-2.25	0.914	-0.79	-18.00	0.090	-20.94	-41.50	0.019	-34.57	-65.00	0.265	-11.54	-88.50	0.149	-16.55
-2.50	0.894	-0.97	-18.50	0.061	-24.31	-42.00	0.001	-64.47	-65.50	0.275	-11.20	-89.00	0.141	-17.01
-2.75	0.873	-1.18	-19.00	0.032	-29.98	-42.50	0.018	-35.12	-66.00	0.285	-10.90	-89.50	0.133	-17.49
-3.00	0.849	-1.42	-19.50	0.003	-50.53	-43.00	0.035	-29.00	-66.50	0.294	-10.64	-90.00	0.126	-18.00
-3.25	0.825	-1.67	-20.00	0.025	-32.13	-43.50	0.053	-25.51	-67.00	0.302	-10.41			
-3.50	0.799	-1.95	-20.50	0.051	-25.86	-44.00	0.070	-23.11	-67.50	0.309	-10.21			
-3.75	0.771	-2.26	-21.00	0.075	-22.50	-44.50	0.086	-21.32	-68.00	0.315	-10.04			
-4.00	0.742	-2.59	-21.50	0.097	-20.30	-45.00	0.101	-19.93	-68.50	0.320	-9.89			
-4.25	0.712	-2.95	-22.00	0.115	-18.76	-45.50	0.114	-18.83	-69.00	0.325	-9.77			
-4.50	0.681	-3.34	-22.50	0.131	-17.65	-46.00	0.127	-17.94	-69.50	0.328	-9.68			
-4.75	0.648	-3.76	-23.00	0.143	-16.87	-46.50	0.138	-17.23	-70.00	0.331	-9.60			
-5.00	0.615	-4.22	-23.50	0.152	-16.36	-47.00	0.147	-16.67	-70.50	0.333	-9.54			
-5.25	0.582	-4.71	-24.00	0.157	-16.06	-47.50	0.154	-16.24	-71.00	0.335	-9.51			
-5.50	0.547	-5.24	-24.50	0.159	-15.97	-48.00	0.160	-15.93	-71.50	0.335	-9.49			
-5.75	0.512	-5.81	-25.00	0.157	-16.06	-48.50	0.164	-15.72	-72.00	0.336	-9.49			
-6.00	0.477	-6.43	-25.50	0.152	-16.35	-49.00	0.166	-15.62	-72.50	0.335	-9.50			
-6.25	0.442	-7.10	-26.00	0.144	-16.82	-49.50	0.166	-15.61	-73.00	0.334	-9.53			
-6.50	0.406	-7.82	-26.50	0.133	-17.51	-50.00	0.164	-15.70	-73.50	0.332	-9.58			

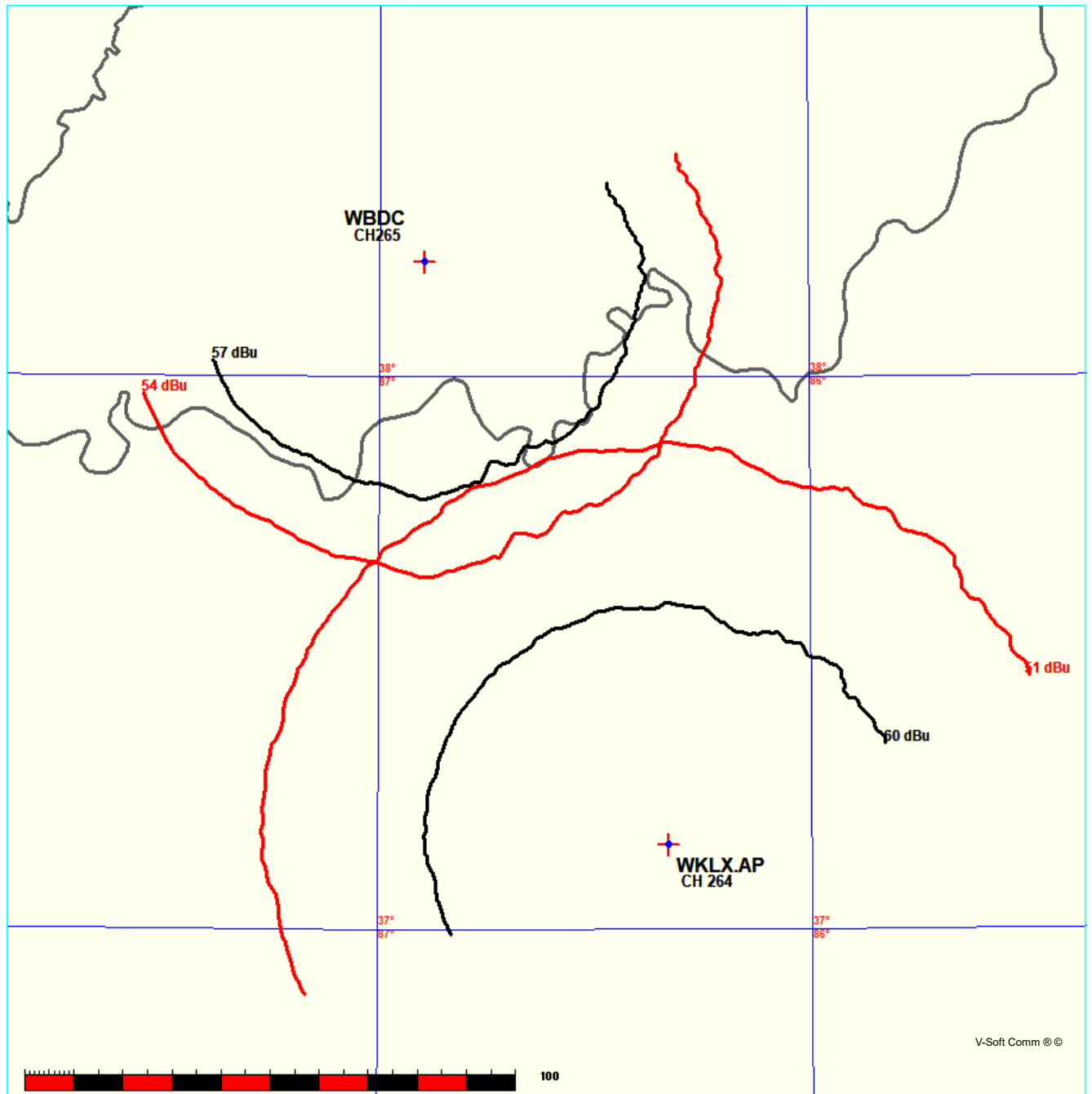
Preliminary, subject to final design and review.

E1B WKLX-WBDC MAXIMUM CLASS PLOT

FMCommander Single Allocation Study - 08-29-2017 - NED 30 Meter

WKLX.AP CH 264 C2 73.215 N
Lat= 37 09 19.0, Lng= 86 19 33.0
22.0 kW 183.7 m HAAT, 359 m COR
Prot.= 60 dBu, Intef.= 51 dBu

WBDC^ CH 265 B1 BLH19940824KP
Lat= 38 12 31.0, Lng= 86 54 00.0
Max CIs: 25.0 kW 100 m HAAT, 255 m COR
Prot.= 57 dBu, Intef.= 54 dBu



E1B WBDC MAXIMUM CLASS FMOVER

Terrain Data: NED 30 Meter FMOver Analysis

WBDC BLH19940824KP
(^ Max Class Parameters)
Channel = 265B1
Max ERP = 25 kW
RCAMSL = 255 m
N. Lat. 38 12 31.0
W. Lng. 86 54 00.0
Protected
57 dBu

WKLX.AP

Channel = 264C2
Max ERP = 22 kW
RCAMSL = 359 m
N. Lat. 37 09 19.0
W. Lng. 86 19 33.0
Interfering
51 dBu

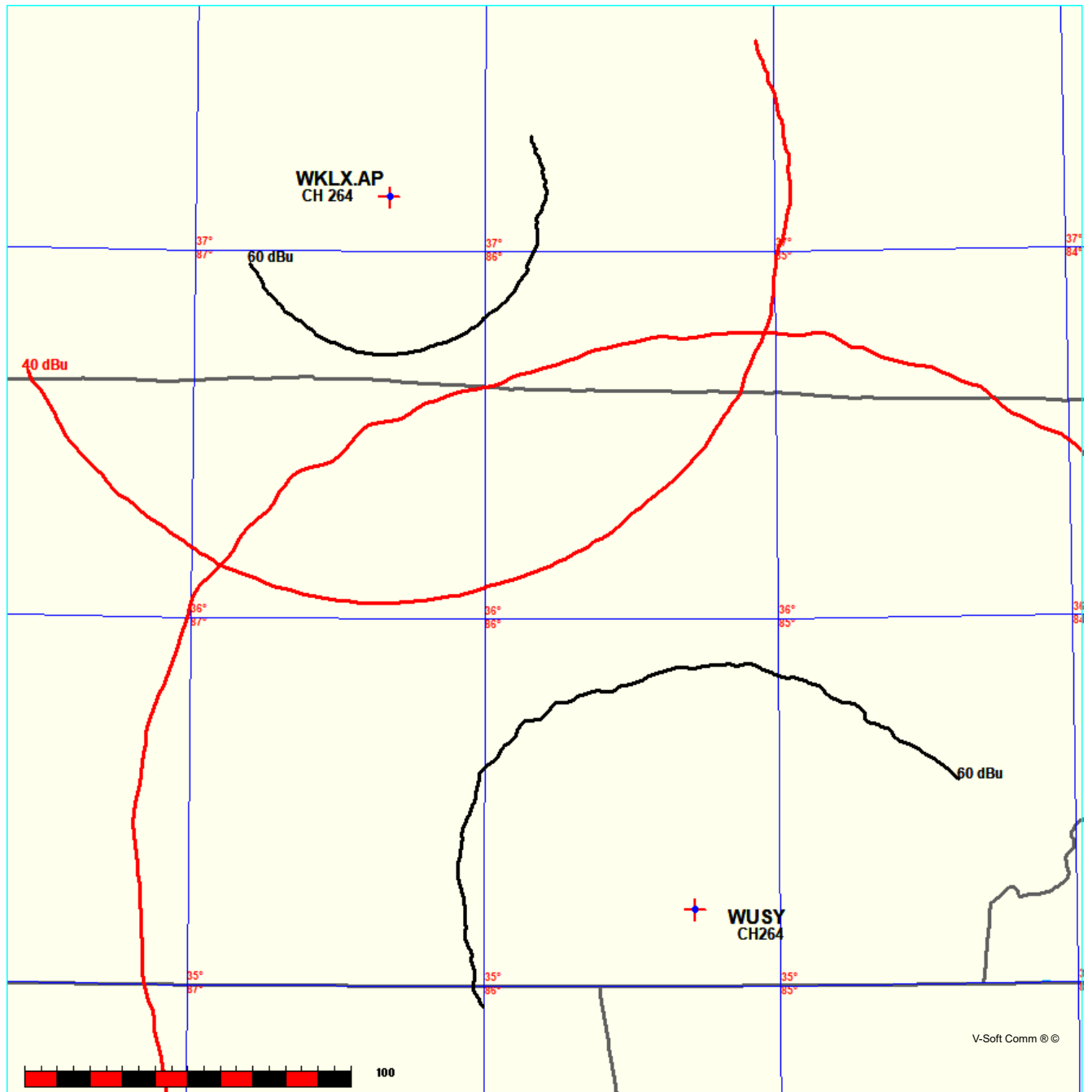
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
155.0	025.0000	0100.7	044.9	337.6	022.0000	0182.6	082.6	50.43	
156.0	025.0000	0098.8	044.5	337.1	022.0000	0182.6	082.9	50.33	
157.0	025.0000	0098.7	044.5	336.6	022.0000	0182.3	082.9	50.32	
158.0	025.0000	0095.0	043.8	336.0	022.0000	0182.8	083.6	50.12	
159.0	025.0000	0091.1	043.1	335.6	022.0000	0182.5	084.4	49.87	
160.0	025.0000	0088.6	042.6	335.1	022.0000	0182.6	084.9	49.70	
161.0	025.0000	0088.1	042.6	334.6	022.0000	0182.8	085.1	49.66	
162.0	025.0000	0092.1	043.3	334.0	022.0000	0182.4	084.5	49.84	
163.0	025.0000	0097.1	044.2	333.4	022.0000	0184.1	083.7	50.15	
164.0	025.0000	0102.7	045.2	332.8	022.0000	0186.7	082.9	50.52	
165.0	025.0000	0107.4	046.0	332.1	022.0000	0189.0	082.3	50.80	
166.0	025.0000	0105.5	045.7	331.6	022.0000	0190.2	082.8	50.68	
167.0	025.0000	0106.1	045.8	331.1	022.0000	0192.8	082.9	50.76	
168.0	025.0000	0107.3	046.0	330.5	022.0000	0194.4	082.9	50.80	
169.0	025.0000	0107.4	046.0	330.0	022.0000	0192.5	083.2	50.65	
170.0	025.0000	0107.5	046.0	329.4	022.0000	0191.1	083.4	50.51	
171.0	025.0000	0109.1	046.3	328.9	022.0000	0191.5	083.5	50.51	
172.0	025.0000	0110.8	046.5	328.3	022.0000	0191.3	083.6	50.48	
173.0	025.0000	0111.4	046.6	327.7	022.0000	0192.2	083.8	50.43	
174.0	025.0000	0113.1	046.9	327.2	022.0000	0192.8	084.0	50.42	
175.0	025.0000	0112.8	046.9	326.7	022.0000	0193.4	084.4	50.31	
176.0	025.0000	0114.8	047.2	326.1	022.0000	0194.1	084.5	50.29	
177.0	025.0000	0116.8	047.5	325.5	022.0000	0190.3	084.7	50.09	
178.0	025.0000	0118.1	047.7	325.0	022.0000	0185.7	085.0	49.82	
179.0	025.0000	0118.9	047.8	324.5	022.0000	0185.8	085.3	49.70	
180.0	025.0000	0118.4	047.7	324.0	022.0000	0185.4	085.9	49.52	

E1C WKLX-WUSY MAXIMUM CLASS PLOT

FMCommander Single Allocation Study - 08-29-2017 - NED 30 Meter

WKLX.AP CH 264 C2 73.215 N
Lat= 37 09 19.0, Lng= 86 19 33.0
22.0 kW 183.7 m HAAT, 359 m COR
Prot.= 60 dBu, Intef.= 40 dBu

WUSY^ CH 264 C0 BLH19890711KC
Lat= 35 12 26.0, Lng= 85 17 10.0
Max Cls: 100.0 kW 450 m HAAT, 851 m COR
Prot.= 60 dBu, Intef.= 40 dBu



Registration Detail

Reg Number	1060660	Status	Constructed
File Number	A0747890	Constructed	01/16/2012
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	37-09-18.7 N 086-19-33.2 W	Address	.75 MILES NORTH OF WINGFIELD CHURCH ON HIGHWAY 1749
City, State	WINGFIELD , KY		
Zip	42101	County	EDMONSON
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
219.5	152.4
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
371.9	151.8

Painting and Lighting Specifications

FAA Chapters 4, 8, 13

Paint and Light in Accordance with FAA Circular Number 70/7460-1J

FAA Notification

FAA Study	2011-ASO-7240-OE	FAA Issue Date	11/25/2011
-----------	------------------	----------------	------------

Owner & Contact Information

FRN	0002655496	Owner Entity Type
-----	------------	-------------------

Owner

ANDERSON COMMUNICATIONS, LLC	P: (270)782-0246
Attention To: CHARLES M. ANDERSON	F:
1519 EUCLID AVENUE	E: cmanderson43@yahoo.com
BOWLING GREEN , KY 42103	

Contact

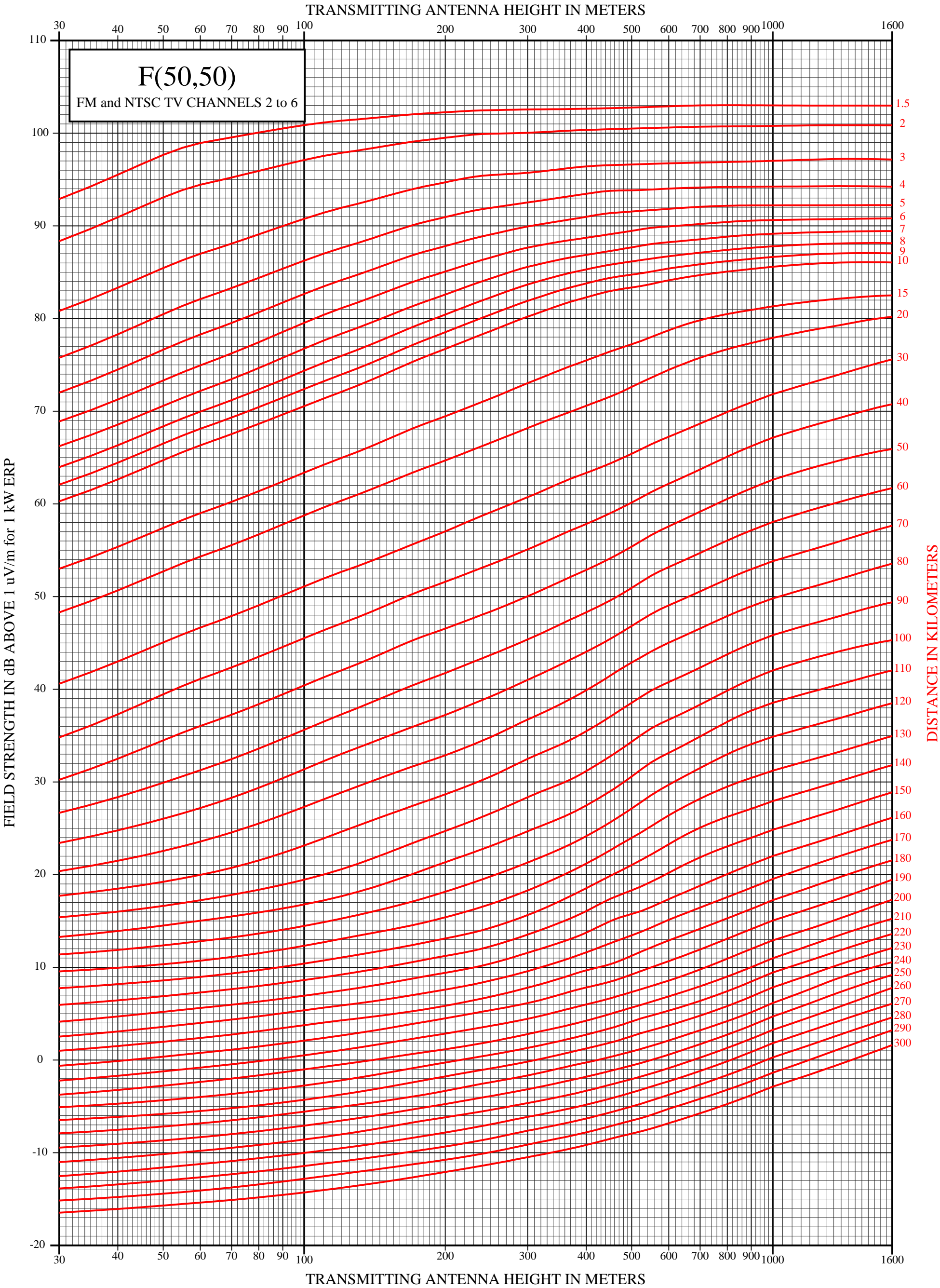
Anderson , Charles M	P: (270)782-0246
1519 Euclid Avenue	F:
Bowling Green , KY 42103	E: cmanderson43@yahoo.com

Last Action Status

Status	Constructed	Received	01/16/2012
Purpose	Notification	Entered	01/16/2012
Mode	Interactive		

47 CFR Section 73.333, Figure 1 and Section 73.699, Figure 9

Estimated Field Strength Exceeded at 50 percent of the potential receiver locations 50 percent of the time, at a receiving antenna height of 9 meters



WUBT 23 DEGREE TERRAIN FROM 7.5 MINUTE TOPOGRAPHIC MAPS

KM	FEET				
3	650	8	720	13	730
3.2	680	8.2	720	13.2	730
3.4	705	8.4	725	13.4	730
3.6	700	8.6	720	13.6	715
3.8	710	8.8	710	13.8	715
4	720	9	700	14	630
4.2	745	9.2	700	14.2	650
4.4	740	9.4	680	14.4	690
4.6	750	9.6	680	14.6	700
4.8	740	9.8	665	14.8	700
5	750	10	620	15	690
5.2	760	10.2	620	15.2	690
5.4	770	10.4	625	15.4	690
5.6	780	10.6	630	15.6	690
5.8	780	10.8	670	15.8	690
6	770	11	690	16	700
6.2	760	11.2	690		
6.4	750	11.4	690		
6.6	745	11.6	690		
6.8	740	11.8	690		
7	740	12	685		
7.2	740	12.2	690		
7.4	730	12.4	700		
7.6	730	12.6	700		
7.8	730	12.8	730		

Average terrain = 218 m using a Lasico L-10A planimeter per §73.313(d)(3).

HAAT = 519 m RCAMSL - 218 m = 301 meters.

Terrain for 23-24-25-26 degree radials obtained from Orlinda, TN, Prices Mills, TN and Franklin, KY-TN 7.5 minute topographic maps.

WUBT 24 DEGREE TERRAIN FROM 7.5 MINUTE TOPOGRAPHIC MAPS

KM	FEET				
3	650	8	720	13	720
3.2	690	8.2	720	13.2	730
3.4	720	8.4	720	13.4	720
3.6	710	8.6	720	13.6	720
3.8	710	8.8	720	13.8	720
4	720	9	710	14	650
4.2	740	9.2	690	14.2	670
4.4	740	9.4	690	14.4	670
4.6	760	9.6	700	14.6	690
4.8	770	9.8	690	14.8	710
5	765	10	670	15	710
5.2	770	10.2	670	15.2	700
5.4	770	10.4	655	15.4	700
5.6	770	10.6	660	15.6	700
5.8	780	10.8	650	15.8	700
6	775	11	670	16	700
6.2	755	11.2	690		
6.4	740	11.4	690		
6.6	740	11.6	690		
6.8	740	11.8	690		
7	740	12	690		
7.2	740	12.2	690		
7.4	740	12.4	700		
7.6	740	12.6	700		
7.8	730	12.8	700		

Average terrain = 219 m using a Lasico L-10A planimeter per §73.313(d)(3).

HAAT = 519 meters Rad. Center - 219 m = 300 meters.

WUBT 25 DEGREE TERRAIN FROM 7.5 MINUTE TOPOGRAPHIC MAPS

KM	FEET				
3	650	8	710	13	720
3.2	690	8.2	710	13.2	720
3.4	720	8.4	710	13.4	720
3.6	730	8.6	700	13.6	700
3.8	700	8.8	710	13.8	680
4	740	9	710	14	680
4.2	740	9.2	680	14.2	650
4.4	750	9.4	680	14.4	660
4.6	750	9.6	670	14.6	690
4.8	760	9.8	625	14.8	700
5	775	10	635	15	710
5.2	760	10.2	650	15.2	710
5.4	760	10.4	675	15.4	710
5.6	775	10.6	690	15.6	710
5.8	780	10.8	680	15.8	720
6	765	11	670	16	740
6.2	755	11.2	690		
6.4	740	11.4	710		
6.6	740	11.6	710		
6.8	740	11.8	710		
7	740	12	710		
7.2	740	12.2	710		
7.4	740	12.4	710		
7.6	740	12.6	710		
7.8	740	12.8	720		

Average terrain = 220 meters using a Lasico L-10A planimeter.

HAAT = 519 m RCAMSL - 220 m = 299 m.

WUBT 26 DEGREE TERRAIN FROM 7.5 MINUTE TOPOGRAPHIC MAPS

KM	FEET				
3	640	8	730	13	720
3.2	680	8.2	720	13.2	720
3.4	700	8.4	720	13.4	710
3.6	670	8.6	710	13.6	680
3.8	680	8.8	710	13.8	700
4	720	9	700	14	710
4.2	710	9.2	660	14.2	680
4.4	730	9.4	620	14.4	650
4.6	710	9.6	630	14.6	680
4.8	750	9.8	620	14.8	690
5	755	10	650	15	690
5.2	750	10.2	670	15.2	710
5.4	755	10.4	675	15.4	720
5.6	780	10.6	700	15.6	720
5.8	780	10.8	685	15.8	720
6	760	11	660	16	750
6.2	750	11.2	670		
6.4	750	11.4	700		
6.6	740	11.6	705		
6.8	740	11.8	710		
7	740	12	720		
7.2	740	12.2	725		
7.4	740	12.4	730		
7.6	740	12.6	730		
7.8	740	12.8	710		

Average terrain = 218.2 meters using a Lasico L-10A planimeter per §73.313(d)(3)

HAAT = 519 m RCAMSL - 218.2 m = 300.8 meters.