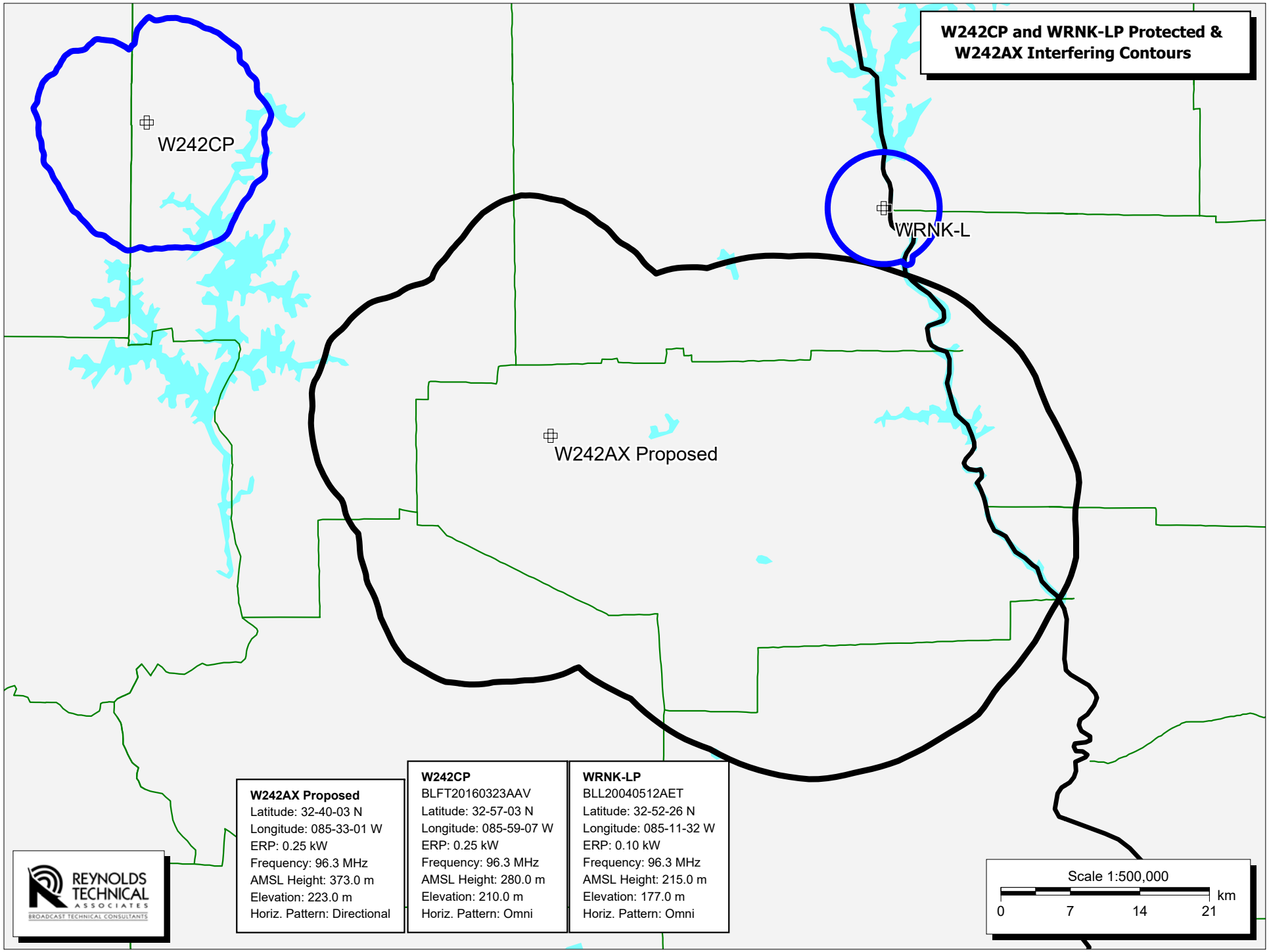
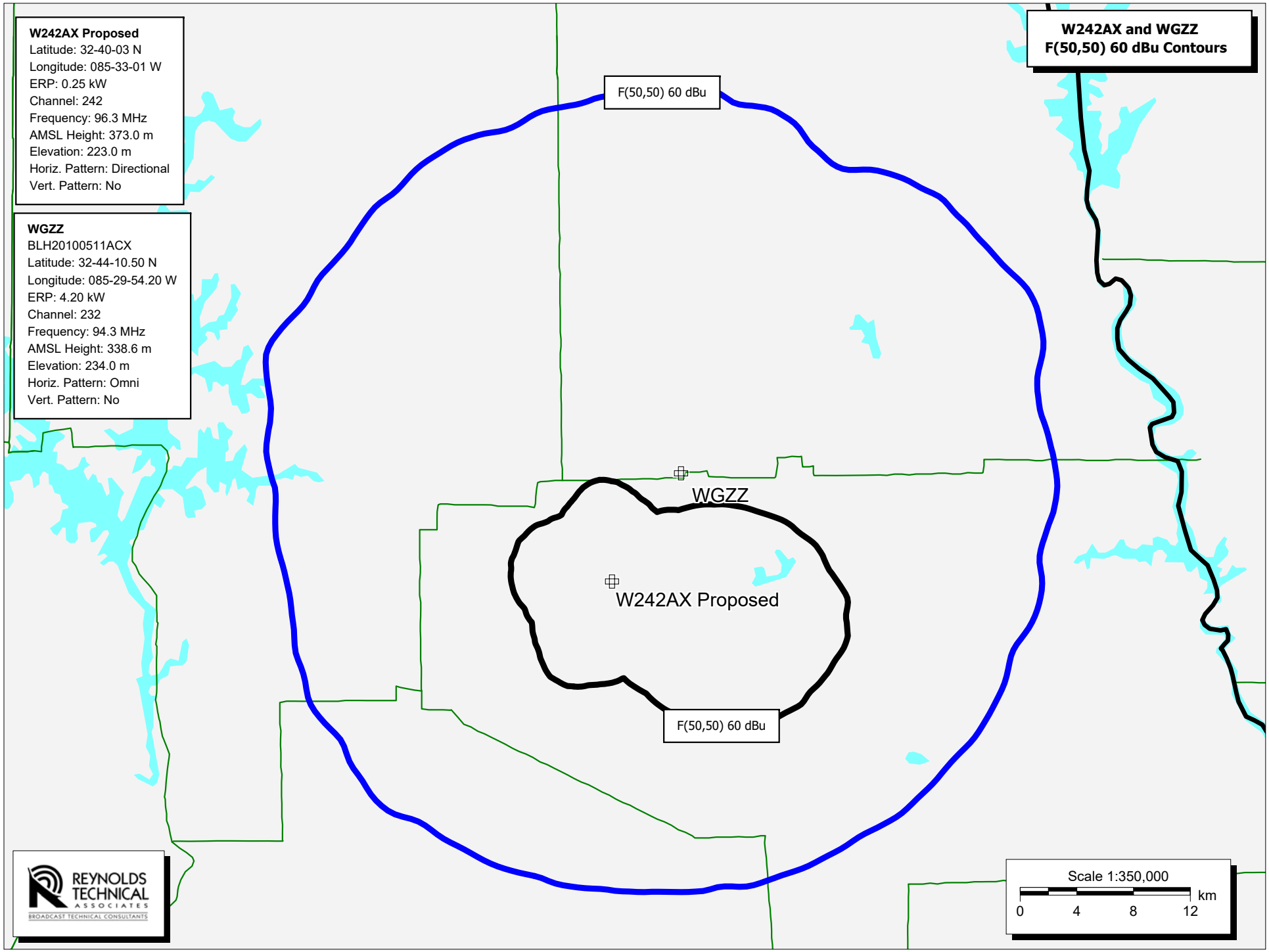
W242AX FMOverlap Study

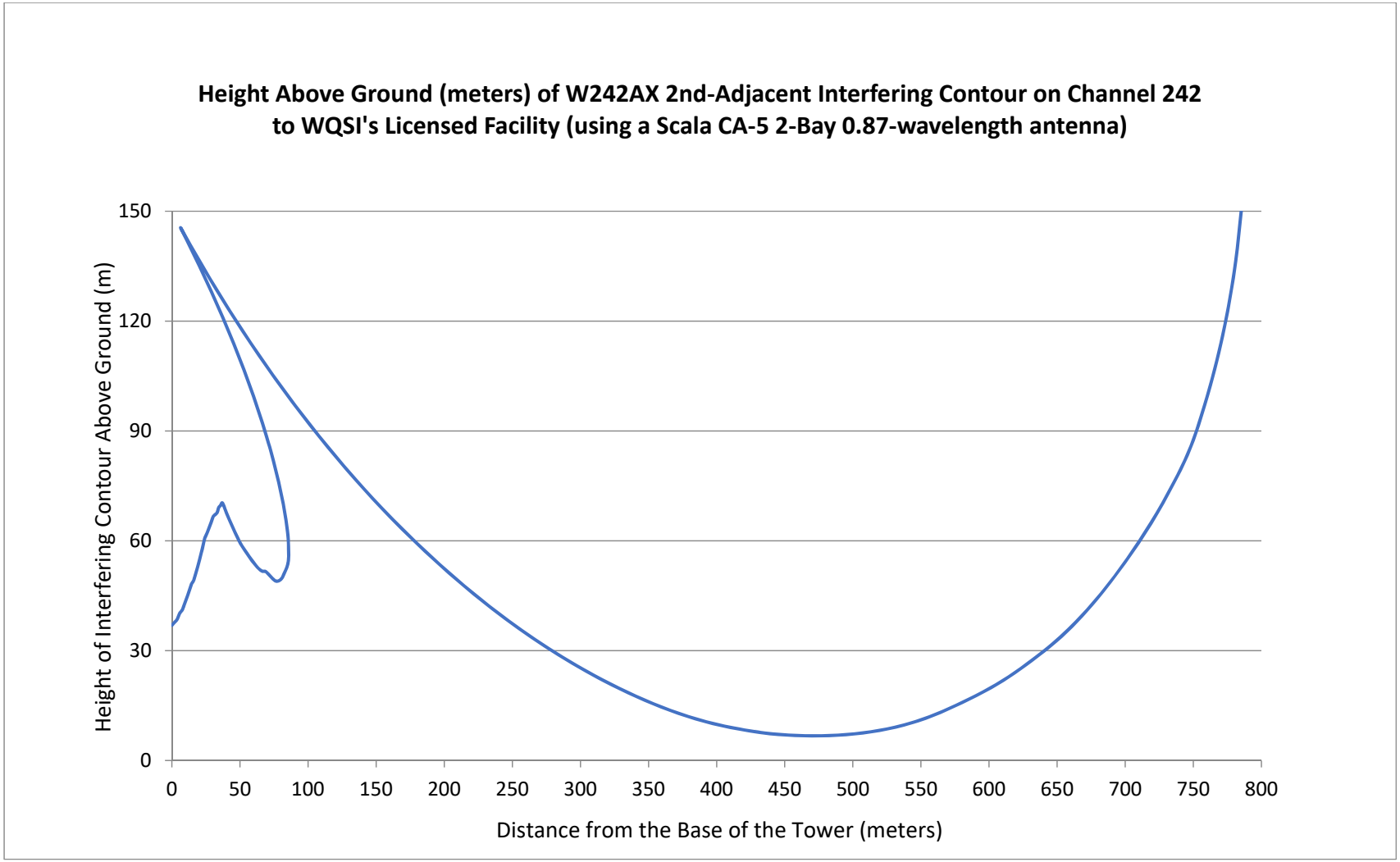
REFERENCE CH# 242D - 96.3 MHz, Pwr= 0.25 kW DA, HAAT= 164.6 M, COR= 361 M DISPLAY DATES
32 40 03.0 N. Average Protected F(50-50)= 16.8 km DATA 07-17-17
85 33 01.0 W. Standard Directional SEARCH 07-17-17

CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
242D	W242AX	CP	DC	124.0	20.4	32 33 54.0	0.200	40.0	11.7	-34.3*	-39.6
Auburn		AL		304.1	BPFT20160128ANY	85 22 13.0		301	Auburn Network, Inc.		
242D	W242AX	LIC	C	146.8	8.9	32 36 01.0	0.013	14.5	4.6	-16.7*	-32.6
Auburn		AL		326.8	BLFT20080617ACT	85 29 53.0	70	249	Auburn Network, Inc.		
244A	WMXA	LIC	CN	124.0	20.4	32 33 54.0	3.500	2.5	26.9	3.1	-7.4*
Opelika		AL		304.1	BLH19980112KC	85 22 13.0	131	316	Amfm Radio Licenses, L.l.c		
240A	WQSI	LIC	CN	185.9	21.9	32 28 17.0	4.300	2.5	25.6	12.2	-3.9*
Tuskegee		AL		5.9	BLH19920803KD	85 34 28.0	115	233	New World Communications,		
242L1	WRNK-LP	LIC		55.5	40.6	32 52 26.0	0.100	18.6	5.6	12.2	1.9
Lanett		AL		235.7	BLL20040512AET	85 11 32.0	4	215	Contact Ministry Center		
242D	W242CP	LIC	C	307.9	51.4	32 57 03.0	0.250	43.4	12.6	1.9	18.1
Alexander City		AL		127.7	BLFT20160323AAV	85 59 07.0		280	Marble City Media, Llc		
242C1	WJIZ-FM	LIC	NCX	130.1	191.4	31 32 57.4	79.000	163.0	67.4	14.4	77.9
Albany		GA		310.9	BLH20160406AAY	84 00 19.3	248	328	Cc Licenses, Llc		

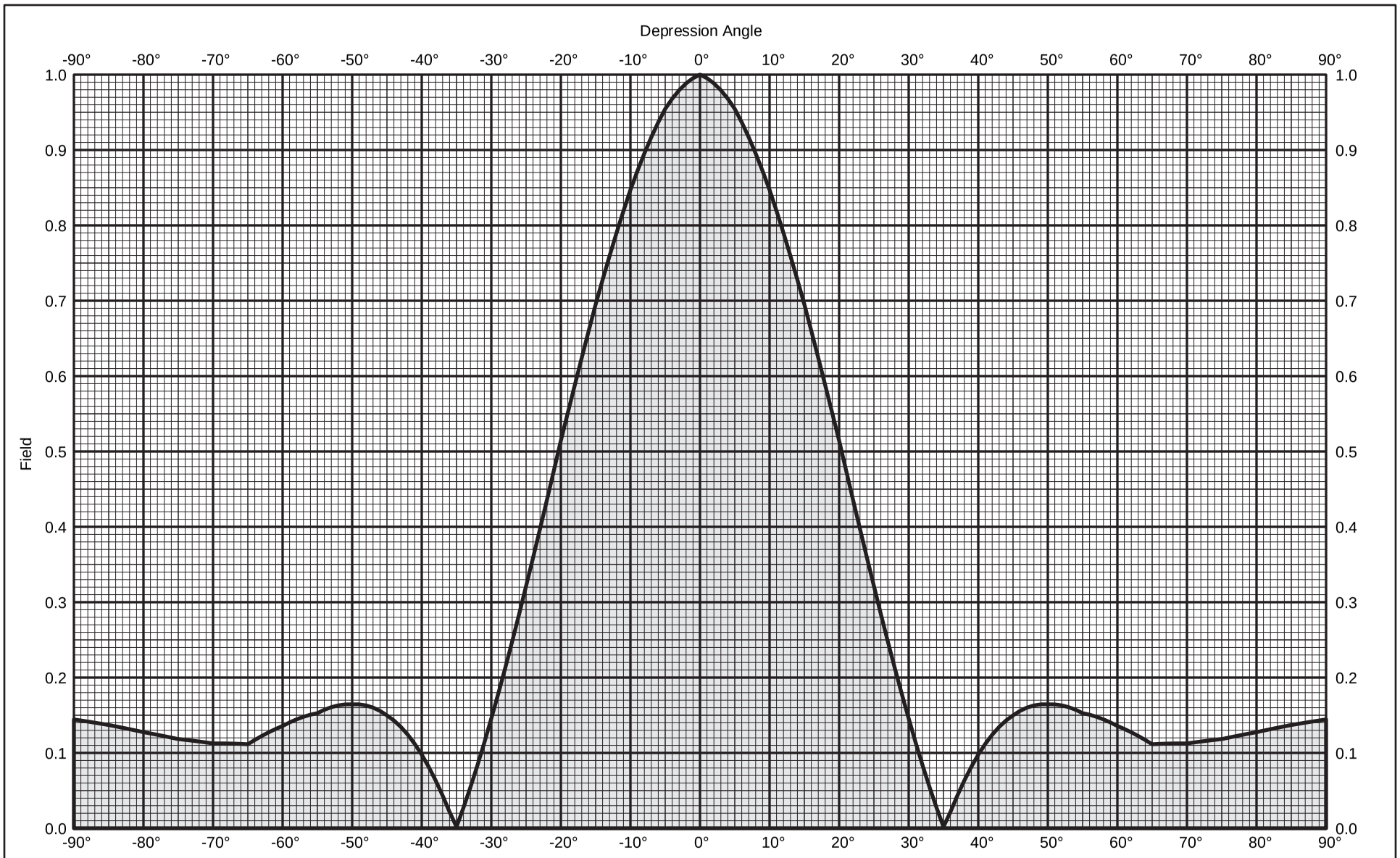
Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. Reference Zone= , Co to 3rd adjacent.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.
« = Station meets FCC minimum distance spacing for its class.


W242CP and WRNK-LP Protected &
W242AX Interfering Contours
W242CP
WRNK-L
W242AX Proposed
W242AX Proposed
Latitude: 32-40-03 N
Longitude: 085-33-01 W
ERP: 0.25 kW
Frequency: 96.3 MHz
AMSL Height: 373.0 m
Elevation: 223.0 m
Horiz. Pattern: Directional
W242CP
BLFT20160323AAV
Latitude: 32-57-03 N
Longitude: 085-59-07 W
ERP: 0.25 kW
Frequency: 96.3 MHz
AMSL Height: 280.0 m
Elevation: 210.0 m
Horiz. Pattern: Omni
WRNK-LP
BLL20040512AET
Latitude: 32-52-26 N
Longitude: 085-11-32 W
ERP: 0.10 kW
Frequency: 96.3 MHz
AMSL Height: 215.0 m
Elevation: 177.0 m
Horiz. Pattern: Omni
REYNOLDS TECHNICAL ASSOCIATES
BROADCAST TECHNICAL CONSULTANTS
Scale 1:500,000
0 7 14 21 km


W242AX Proposed
Latitude: 32-40-03 N
Longitude: 085-33-01 W
ERP: 0.25 kW
Channel: 242
Frequency: 96.3 MHz
AMSL Height: 373.0 m
Elevation: 223.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
WGZZ
BLH20100511ACX
Latitude: 32-44-10.50 N
Longitude: 085-29-54.20 W
ERP: 4.20 kW
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 338.6 m
Elevation: 234.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
W242AX and WGZZ
F(50,50) 60 dBu Contours
F(50,50) 60 dBu
WGZZ
W242AX Proposed
F(50,50) 60 dBu
REYNOLDS TECHNICAL ASSOCIATES
BROADCAST TECHNICAL CONSULTANTS
Scale 1:350,000
km
0
4
8
12



Received Signal Level from WQSI at the W242AX tower: 63 dBu
Interfering Contour: 103 dBu
Contour's Lowest AGL: 6.8 meters (468 meters from the tower)



Two CA5-FM/CP Yagis

Stacked 0.87 wavelength

8.5 dBd gain (x 7.1)

Circular Polarization

Vertical plane Pattern

KATHREIN
SCALA DIVISION
Post Office Box 4580
Medford, OR 97501 (USA)
Phone:(541)779-6500
Fax:(541)779-3991
http://www.kathrein-scala.com

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SCALA DIVISION

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Circular Polarization

Vertical plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.144	-16.81	-8.31	0.15	-45	0.150	-16.49	-7.99	0.16
-89	0.143	-16.89	-8.39	0.14	-44	0.143	-16.89	-8.39	0.14
-88	0.142	-16.98	-8.48	0.14	-43	0.134	-17.43	-8.93	0.13
-87	0.140	-17.07	-8.57	0.14	-42	0.124	-18.13	-9.63	0.11
-86	0.139	-17.16	-8.66	0.14	-41	0.112	-19.03	-10.53	0.09
-85	0.137	-17.26	-8.76	0.13	-40	0.098	-20.20	-11.70	0.07
-84	0.135	-17.38	-8.88	0.13	-39	0.082	-21.78	-13.28	0.05
-83	0.133	-17.50	-9.00	0.13	-38	0.063	-23.95	-15.45	0.03
-82	0.131	-17.62	-9.12	0.12	-37	0.044	-27.23	-18.73	0.01
-81	0.130	-17.75	-9.25	0.12	-36	0.022	-33.27	-24.77	0.00
-80	0.128	-17.89	-9.39	0.12	-35	0.010	-40.00	-31.50	0.00
-79	0.126	-18.00	-9.50	0.11	-34	0.027	-31.23	-22.73	0.01
-78	0.124	-18.13	-9.63	0.11	-33	0.055	-25.26	-16.76	0.02
-77	0.122	-18.26	-9.76	0.11	-32	0.083	-21.58	-13.08	0.05
-76	0.120	-18.39	-9.89	0.10	-31	0.114	-18.88	-10.38	0.09
-75	0.118	-18.54	-10.04	0.10	-30	0.146	-16.73	-8.23	0.15
-74	0.117	-18.61	-10.11	0.10	-29	0.179	-14.97	-6.47	0.23
-73	0.116	-18.69	-10.19	0.10	-28	0.213	-13.45	-4.95	0.32
-72	0.115	-18.78	-10.28	0.09	-27	0.248	-12.12	-3.62	0.43
-71	0.114	-18.87	-10.37	0.09	-26	0.284	-10.93	-2.43	0.57
-70	0.113	-18.97	-10.47	0.09	-25	0.321	-9.86	-1.36	0.73
-69	0.113	-18.97	-10.47	0.09	-24	0.359	-8.90	-0.40	0.91
-68	0.113	-18.97	-10.47	0.09	-23	0.397	-8.02	0.48	1.12
-67	0.112	-18.99	-10.49	0.09	-22	0.436	-7.21	1.29	1.34
-66	0.112	-19.02	-10.52	0.09	-21	0.475	-6.47	2.03	1.60
-65	0.112	-19.05	-10.55	0.09	-20	0.514	-5.77	2.73	1.87
-64	0.117	-18.62	-10.12	0.10	-19	0.551	-5.17	3.33	2.15
-63	0.122	-18.24	-9.74	0.11	-18	0.588	-4.61	3.89	2.45
-62	0.127	-17.90	-9.40	0.11	-17	0.624	-4.09	4.41	2.76
-61	0.132	-17.60	-9.10	0.12	-16	0.660	-3.61	4.89	3.08
-60	0.136	-17.34	-8.84	0.13	-15	0.695	-3.16	5.34	3.42
-59	0.140	-17.05	-8.55	0.14	-14	0.728	-2.76	5.74	3.75
-58	0.144	-16.80	-8.30	0.15	-13	0.759	-2.39	6.11	4.08
-57	0.148	-16.60	-8.10	0.15	-12	0.790	-2.05	6.45	4.42
-56	0.151	-16.44	-7.94	0.16	-11	0.819	-1.73	6.77	4.75
-55	0.153	-16.32	-7.82	0.17	-10	0.847	-1.44	7.06	5.08
-54	0.157	-16.07	-7.57	0.18	-9	0.872	-1.19	7.31	5.38
-53	0.161	-15.88	-7.38	0.18	-8	0.895	-0.96	7.54	5.68
-52	0.163	-15.75	-7.25	0.19	-7	0.917	-0.75	7.75	5.95
-51	0.164	-15.68	-7.18	0.19	-6	0.937	-0.57	7.93	6.21
-50	0.164	-15.68	-7.18	0.19	-5	0.955	-0.40	8.10	6.45
-49	0.164	-15.68	-7.18	0.19	-4	0.968	-0.28	8.22	6.63
-48	0.163	-15.76	-7.26	0.19	-3	0.979	-0.18	8.32	6.79
-47	0.160	-15.91	-7.41	0.18	-2	0.988	-0.10	8.40	6.92
-46	0.156	-16.15	-7.65	0.17	-1	0.995	-0.04	8.46	7.01
					0	1.000	0.00	8.50	7.08

KATHREIN
SCALA DIVISION

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8.5 dBd gain (x 7.1)
Circular Polarization

Vertical plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	8.50	7.08	45	0.150	-16.49	-7.99	0.16
1	0.995	-0.04	8.46	7.01	46	0.156	-16.15	-7.65	0.17
2	0.988	-0.10	8.40	6.92	47	0.160	-15.91	-7.41	0.18
3	0.979	-0.18	8.32	6.79	48	0.163	-15.76	-7.26	0.19
4	0.968	-0.28	8.22	6.63	49	0.164	-15.68	-7.18	0.19
5	0.955	-0.40	8.10	6.45	50	0.164	-15.68	-7.18	0.19
6	0.937	-0.57	7.93	6.21	51	0.164	-15.68	-7.18	0.19
7	0.917	-0.75	7.75	5.95	52	0.163	-15.75	-7.25	0.19
8	0.895	-0.96	7.54	5.68	53	0.161	-15.88	-7.38	0.18
9	0.872	-1.19	7.31	5.38	54	0.157	-16.07	-7.57	0.18
10	0.847	-1.44	7.06	5.08	55	0.153	-16.32	-7.82	0.17
11	0.819	-1.73	6.77	4.75	56	0.151	-16.44	-7.94	0.16
12	0.790	-2.05	6.45	4.42	57	0.148	-16.60	-8.10	0.15
13	0.759	-2.39	6.11	4.08	58	0.144	-16.80	-8.30	0.15
14	0.728	-2.76	5.74	3.75	59	0.140	-17.05	-8.55	0.14
15	0.695	-3.16	5.34	3.42	60	0.136	-17.34	-8.84	0.13
16	0.660	-3.61	4.89	3.08	61	0.132	-17.60	-9.10	0.12
17	0.624	-4.09	4.41	2.76	62	0.127	-17.90	-9.40	0.11
18	0.588	-4.61	3.89	2.45	63	0.122	-18.24	-9.74	0.11
19	0.551	-5.17	3.33	2.15	64	0.117	-18.62	-10.12	0.10
20	0.514	-5.77	2.73	1.87	65	0.112	-19.05	-10.55	0.09
21	0.475	-6.47	2.03	1.60	66	0.112	-19.02	-10.52	0.09
22	0.436	-7.21	1.29	1.34	67	0.112	-18.99	-10.49	0.09
23	0.397	-8.02	0.48	1.12	68	0.113	-18.97	-10.47	0.09
24	0.359	-8.90	-0.40	0.91	69	0.113	-18.97	-10.47	0.09
25	0.321	-9.86	-1.36	0.73	70	0.113	-18.97	-10.47	0.09
26	0.284	-10.93	-2.43	0.57	71	0.114	-18.87	-10.37	0.09
27	0.248	-12.12	-3.62	0.43	72	0.115	-18.78	-10.28	0.09
28	0.213	-13.45	-4.95	0.32	73	0.116	-18.69	-10.19	0.10
29	0.179	-14.96	-6.46	0.23	74	0.117	-18.61	-10.11	0.10
30	0.146	-16.73	-8.23	0.15	75	0.118	-18.54	-10.04	0.10
31	0.114	-18.88	-10.38	0.09	76	0.120	-18.39	-9.89	0.10
32	0.083	-21.58	-13.08	0.05	77	0.122	-18.26	-9.76	0.11
33	0.055	-25.26	-16.76	0.02	78	0.124	-18.13	-9.63	0.11
34	0.027	-31.23	-22.73	0.01	79	0.126	-18.00	-9.50	0.11
35	0.010	-40.00	-31.50	0.00	80	0.128	-17.89	-9.39	0.12
36	0.022	-33.27	-24.77	0.00	81	0.130	-17.75	-9.25	0.12
37	0.044	-27.23	-18.73	0.01	82	0.131	-17.62	-9.12	0.12
38	0.063	-23.95	-15.45	0.03	83	0.133	-17.50	-9.00	0.13
39	0.082	-21.78	-13.28	0.05	84	0.135	-17.38	-8.88	0.13
40	0.098	-20.20	-11.70	0.07	85	0.137	-17.26	-8.76	0.13
41	0.112	-19.03	-10.53	0.09	86	0.139	-17.16	-8.66	0.14
42	0.124	-18.13	-9.63	0.11	87	0.140	-17.07	-8.57	0.14
43	0.134	-17.43	-8.93	0.13	88	0.142	-16.98	-8.48	0.14
44	0.143	-16.89	-8.39	0.14	89	0.143	-16.89	-8.39	0.14
					90	0.144	-16.81	-8.31	0.15