

MINOR CHANGE APPLICATION TO MODIFY CONSTRUCTION PERMIT  
BNPFT-20130321ACG, TRANSLATOR STATION W232CI  
CH232D, Fayetteville, NC

May 2014

**TECHNICAL STATEMENT**

This technical statement and attached exhibits were prepared on behalf of WDAS License Limited Partnership (WDAS), licensee of translator construction permit BNPFT-20130321ACG. The applicant proposes to relocate and improve translator W232CI in order to provide fill-in service for full power station WAZZ (AM) in order to better serve areas of the Fayetteville community. Specifically, WDAS proposes to increase power of the translator to 250w ERP on the same frequency and relocate to a tower co-owned by WDAS and used for WAZZ (AM). The applicant will rebroadcast WAZZ (AM) on W232CI upon completion of the relocation of the translator. The 60dBu contour of the proposed facility will be entirely encompassed by the 2mV/m contour of WAZZ.

Exhibit A demonstrates that the 60dBu contour of the proposed translator will not extend beyond the 2mV/m Day contour of WAZZ nor beyond 25 miles from the WAZZ transmitter.

Exhibit B is an allocation study for the proposed W232CI operation.

Exhibit B1 shows pertinent interfering contours from the proposed W232CI to co-channel stations

Exhibit B2 shows pertinent interfering contours to first adjacent stations.

Exhibit B3 demonstrates that the proposed W232CI operation utilizing a 5-bay  $\frac{1}{2}$  wave spaced antenna will not cause interference to 2<sup>nd</sup> adjacent WKSL, 230C

Exhibit B4 demonstrates that the proposed W232CI operation utilizing a 5-bay  $\frac{1}{2}$  wave spaced antenna will not cause interference to 2<sup>nd</sup> adjacent WQDR-FM, 234C

Exhibit C demonstrates compliance with 74.1233(a)(1) of the Commission's rules requiring any minor change of a translator's facilities to continue to provide 1mV/m service to some portion of its previously authorized service area.

WDAS is proposing to relocate W232CI to ASR 1059252 which is an AM tower used for WAZZ. There will be no modification to the tower. Because WAZZ is operating as a grounded tower, folded unipole antenna, no disturbance to the input impedance to the operating WAZZ antenna is anticipated.

#### **Environmental Assessment**

The proposed facility will use a five-bay  $\frac{1}{2}$  wave spaced antenna in order to keep the W232CI RF at 2m AGL below that necessary to keep the W232CI signal less than 40dBu higher than either second adjacent WQDR (234C) or WKSL (230C). Because of the unique quality of the proposed antenna, the RFR at ground level is significantly reduced.

The station will emit 250 watts ERP (both horizontal and vertical). Using the FCC program "FM Model for Windows", it was calculated that the proposed antenna contributes approximately  $2.8 \mu\text{W}/\text{cm}^2$  or 1.4% of the total allowable  $200 \mu\text{W}/\text{cm}^2$ . The 1.4% of maximum allowable RF at ground level takes place 484m from the base of the tower.

There are no other non-excluded RF sources in the area other than the 1kW AM, WAZZ which is compliant with appropriate RFR regulations and has fencing in place to prevent public access to areas near the tower where excessive RFR exists. Because of the very low RFR at ground level of the proposed W232CI antenna, W232CI is categorically excluded from further environmental review under 1.1306 of the FCC rules and regulations.

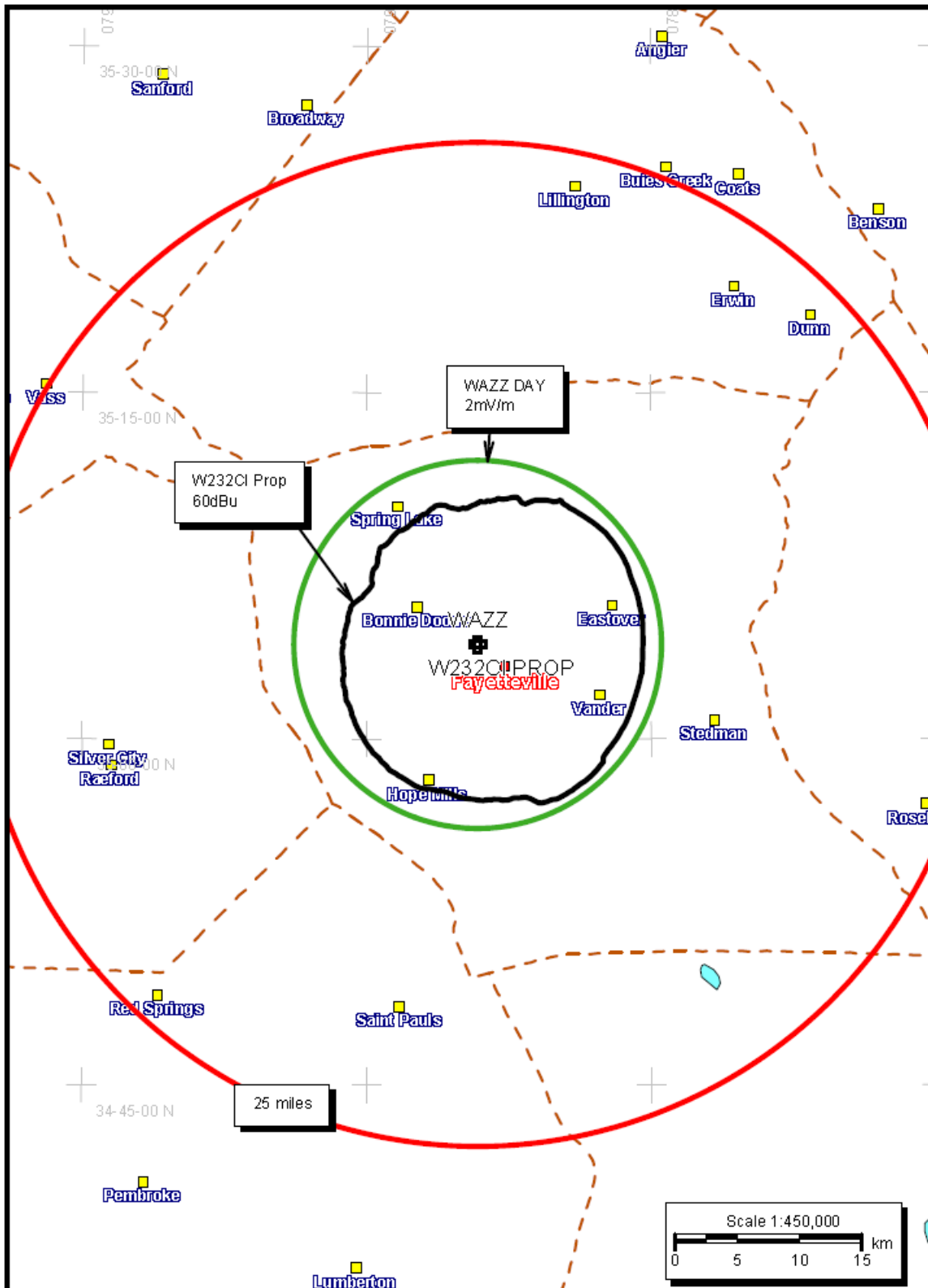
Respectfully Submitted



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EXHIBIT A

Proposed W232CI From WAZZ Tower (250w @ 300ft AGL)



## EXHIBIT B

### Interference Study for W232CI, Fayetteville, NC

ComStudy 2.2 search of channel 232 (94.3 MHz Class D) at 35-04-06.0 N, 78-54-09.0 W.  
NAD27, Power 250 watts, HAGL, 100m, COR AMSL Height 141m

\*CDBS Data as of 4/30/2014

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE	
WQDR-FM	RALEIGH	NC	234	C	75.24	0.00	26.1	-5.62 dB	See Exhibit B4
WKSL	CARY	NC	230	C	72.03	0.00	6.1	-3.28 dB	See Exhibit B3
W232CH	RALEIGH	NC	232	D	72.03	0.00	6.1	-0.0 dB	See Exhibit B1
WCMG	LATTA	SC	232	C3	88.46	0.00	217.9	2.25 dB	See Exhibit B1
WZKB	WALLACE	NC	232	A	89.55	0.00	112.4	5.10 dB	See Exhibit B1
W231AB	LUMBERTON	NC	231	D	48.62	0.00	191.5	13.80 dB	
WRHD	FARMVILLE	NC	232	A	143.45	0.00	64.9	19.46 dB	
W229BD	SOUTHERN PINES	NC	229	D	45.45	0.00	278.4	24.88 dB	
W231BV	WHITEVILLE	NC	231	D	84.48	0.00	168.1	25.11 dB	
WVRH	NORLINA	NC	232	A	170.79	0.00	21.9	25.47 dB	
WWLV	LEXINGTON	NC	231	C	157.49	0.00	307.3	28.86 dB	
WPTI	EDEN	NC	233	C1	168.53	0.00	327.7	29.54 dB	
WPTI	EDEN	NC	233	C1	168.29	0.00	327.7	29.60 dB	
WWLV	LEXINGTON	NC	231	C1	181.41	0.00	291.5	30.75 dB	
WKXS-FM	LELAND	NC	233	A	129.35	0.00	137.3	32.55 dB	
WVCO	LORIS	SC	235	C3	119.77	0.00	174.2	33.14 dB	
W232AX	ROCK HILL	SC	232	D	194.01	0.00	265.8	33.55 dB	
W231CL	WILMINGTON	NC	231	D	127.17	0.00	136.8	34.04 dB	
WPTI	EDEN	NC	233	C1	168.53	0.00	327.7	34.95 dB	
WWNQ	FOREST ACRES	SC	232	A	228.76	0.00	239.3	35.89 dB	
WYEZ	MURRELLS INLET	SC	233	C3	170.55	0.00	189.9	37.34 dB	
WSCC-FM	GOOSE CREEK	SC	232	C3	264.11	0.00	199.2	39.66 dB	

EXHIBIT B1

Proposed W232CI From WAZZ Tower (250w @ 100m AGL) Co-Channel Protections

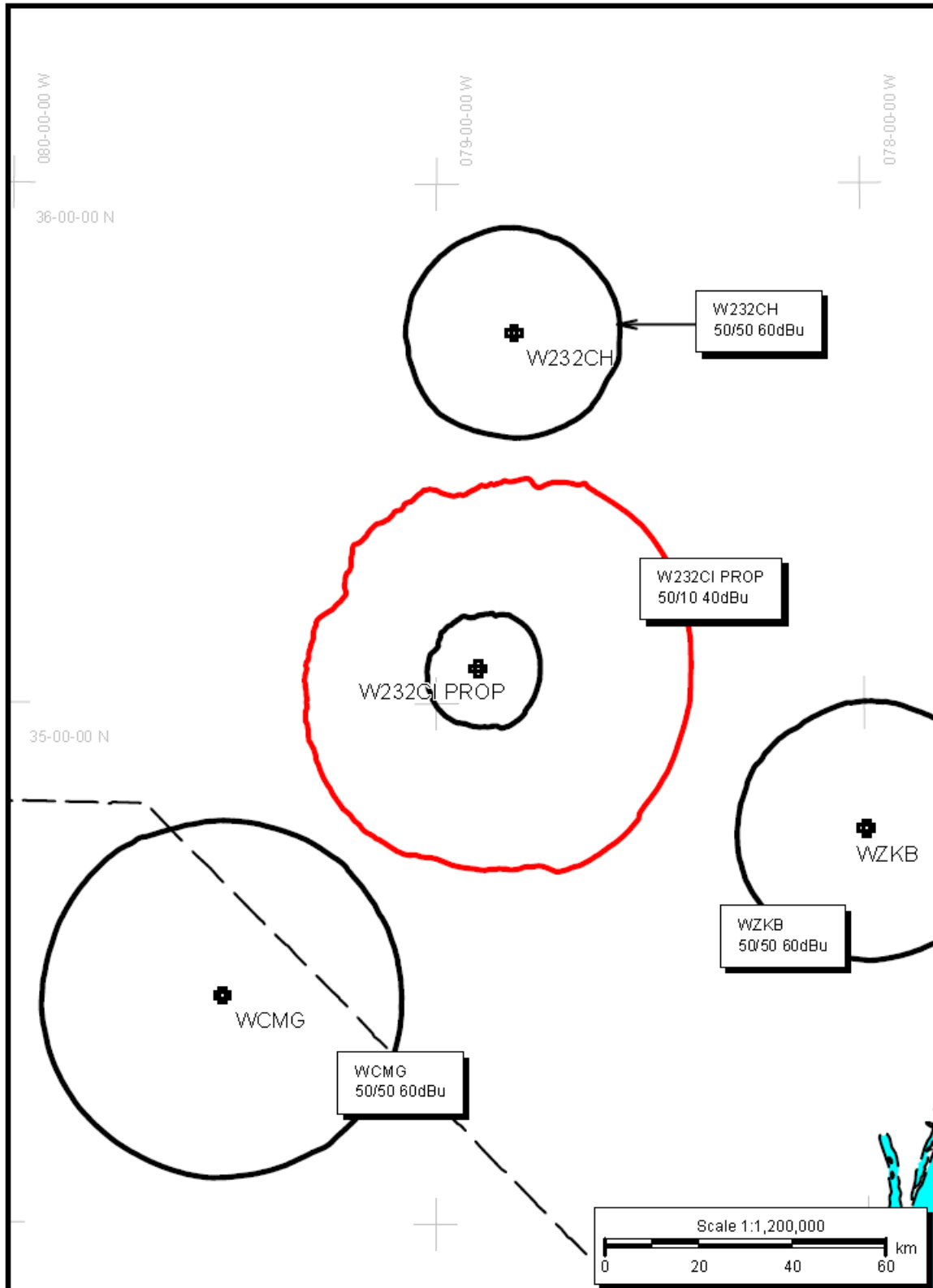


EXHIBIT B2

Proposed W232CI From WAZZ Tower (250w @ 100m AGL) 1st Adj Channel Protections

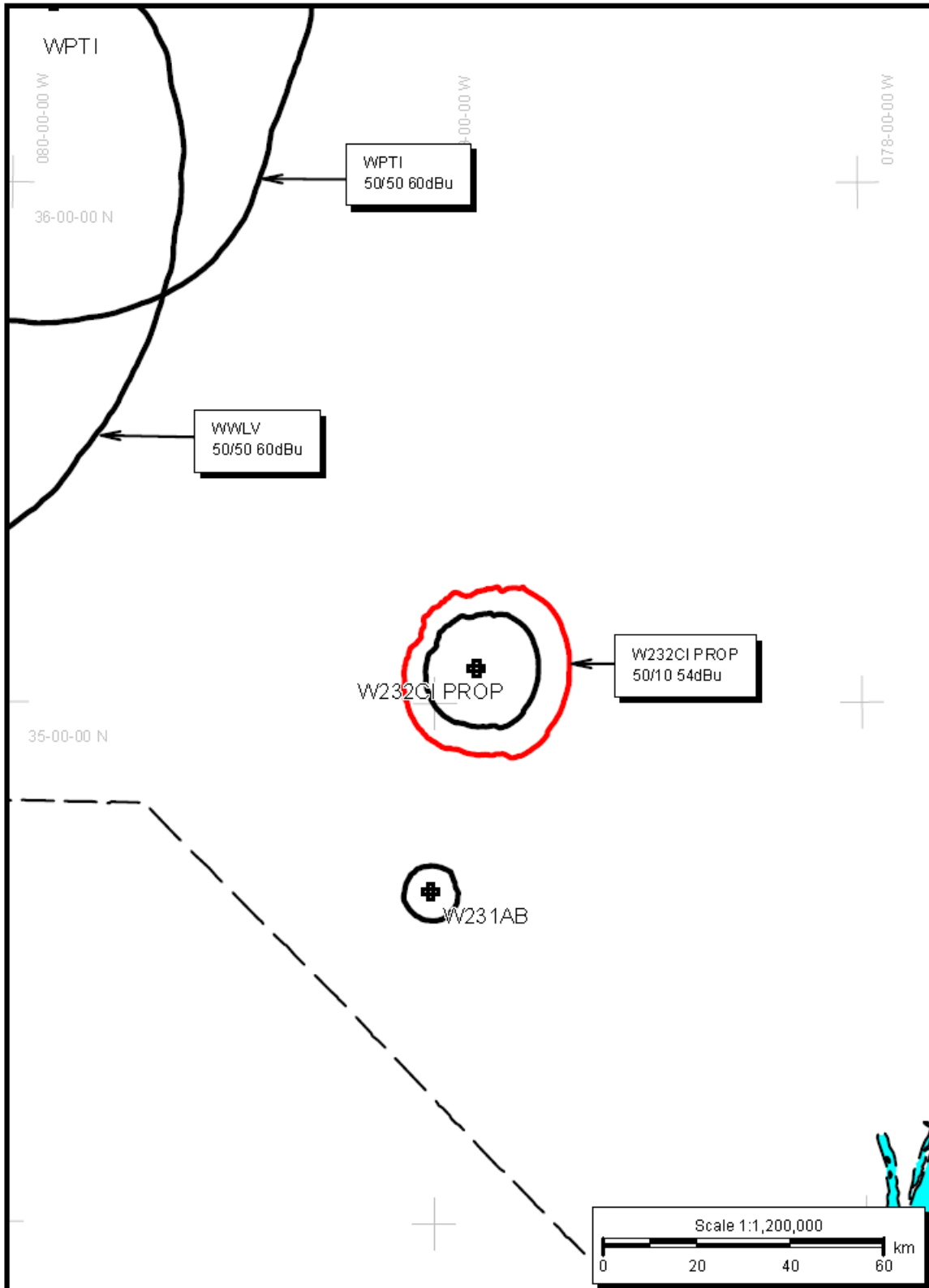


EXHIBIT B3  
2<sup>nd</sup> Adjacent Protection to WKSL (FM) 230C

W232CI Proposed Fayetteville, NC

74.1204(d) Showing

Translator or LPFM Maximum Licensed ERP = 0.25

Translator or LPFM Antenna Height AG = 100 Meters

W232CI Antenna Model = LPX5H

Protected Station's Contour = 64.12714 dBu

Translator's or LPFM's full Interference contour 104.12714

Relative Field on the horizon at Review Azimuth = 1.000

Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW

Distance between stations = 72.2 km

Protected Station= WKSL, 100 kW, 557 M Meters COR AMSL

\*MIN – Minimum height of Interfering Contour 12.107m AGL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	689.6250	689.6250	100.000
01.00	0.997	1.0	0.2485	687.5561	687.4514	088.000
02.00	0.988	1.0	0.2440	681.3495	680.9344	076.221
03.00	0.972	1.0	0.2362	670.3155	669.3969	064.918
04.00	0.951	1.0	0.2261	655.8334	654.2358	054.251
05.00	0.924	1.0	0.2134	637.2135	634.7887	044.463
06.00	0.892	1.0	0.1989	615.1455	611.7757	035.700
07.00	0.855	1.0	0.1828	589.6294	585.2344	028.142
08.00	0.813	1.0	0.1652	560.6652	555.2088	021.970
09.00	0.768	1.0	0.1475	529.6320	523.1114	017.147
10.00	0.719	1.0	0.1292	495.8404	488.3074	013.898
11.00	0.667	1.0	0.1112	459.9799	451.5288	012.232
12.00	0.613	1.0	0.0939	422.7401	413.5022	012.107 *
13.00	0.557	1.0	0.0776	384.1211	374.2761	013.592
14.00	0.5	1.0	0.0625	344.8125	334.5701	016.582
15.00	0.443	1.0	0.0491	305.5039	295.0941	020.930
16.00	0.385	1.0	0.0371	265.5056	255.2204	026.817
17.00	0.329	1.0	0.0271	226.8866	216.9728	033.665
18.00	0.273	1.0	0.0186	188.2676	179.0532	041.822
19.00	0.219	1.0	0.0120	151.0279	142.7997	050.830
20.00	0.167	1.0	0.0070	115.1674	108.2219	060.610
21.00	0.118	1.0	0.0035	081.3758	075.9708	070.838
22.00	0.071	1.0	0.0013	048.9634	045.3981	081.658
23.00	0.028	1.0	0.0002	019.3095	017.7745	092.455
24.00	0.012	1.0	0.0000	008.2755	007.5600	096.634
25.00	0.049	1.0	0.0006	033.7916	030.6256	085.719
26.00	0.082	1.0	0.0017	056.5493	050.8261	075.210
27.00	0.111	1.0	0.0031	076.5484	068.2051	065.248
28.00	0.136	1.0	0.0046	093.7890	082.8108	055.969
29.00	0.157	1.0	0.0062	108.2711	094.6961	047.509
30.00	0.174	1.0	0.0076	119.9947	103.9185	040.003
31.00	0.188	1.0	0.0088	129.6495	111.1313	033.226
32.00	0.198	1.0	0.0098	136.5458	115.7974	027.642
33.00	0.205	1.0	0.0105	141.3731	118.5655	023.003
34.00	0.209	1.0	0.0109	144.1316	119.4905	019.403
35.00	0.21	1.0	0.0110	144.8212	118.6306	016.934
36.00	0.208	1.0	0.0108	143.4420	116.0470	015.687
37.00	0.204	1.0	0.0104	140.6835	112.3548	015.335

38.00	0.197	1.0	0.0097	135.8561	107.0561	016.359
39.00	0.189	1.0	0.0089	130.3391	101.2925	017.975
40.00	0.179	1.0	0.0080	123.4429	094.5627	020.652
41.00	0.168	1.0	0.0071	115.8570	087.4384	023.991
42.00	0.155	1.0	0.0060	106.8919	079.4361	028.475
43.00	0.142	1.0	0.0050	097.9268	071.6191	033.214
44.00	0.128	1.0	0.0041	088.2720	063.4976	038.681
45.00	0.114	1.0	0.0032	078.6173	055.5908	044.409
46.00	0.099	1.0	0.0025	068.2729	047.4263	050.889
47.00	0.085	1.0	0.0018	058.6181	039.9775	057.129
48.00	0.07	1.0	0.0012	048.2738	032.3014	064.126
49.00	0.056	1.0	0.0008	038.6190	025.3363	070.854
50.00	0.042	1.0	0.0004	028.9643	018.6179	077.812
51.00	0.029	1.0	0.0002	019.9991	012.5859	084.458
52.00	0.017	1.0	0.0001	011.7236	007.2178	090.762
53.00	0.005	1.0	0.0000	003.4481	002.0751	097.246
54.00	0.006	1.0	0.0000	004.1378	002.4321	096.652
55.00	0.016	1.0	0.0001	011.0340	006.3288	090.961
56.00	0.026	1.0	0.0002	017.9303	010.0265	085.135
57.00	0.034	1.0	0.0003	023.4473	012.7703	080.335
58.00	0.042	1.0	0.0004	028.9643	015.3487	075.437
59.00	0.048	1.0	0.0006	033.1020	017.0488	071.626
60.00	0.054	1.0	0.0007	037.2398	018.6199	067.749
61.00	0.059	1.0	0.0009	040.6879	019.7259	064.414
62.00	0.064	1.0	0.0010	044.1360	020.7206	061.030
63.00	0.067	1.0	0.0011	046.2049	020.9766	058.831
64.00	0.07	1.0	0.0012	048.2738	021.1618	056.612
65.00	0.072	1.0	0.0013	049.6530	020.9843	054.999
66.00	0.074	1.0	0.0014	051.0323	020.7567	053.380
67.00	0.075	1.0	0.0014	051.7219	020.2093	052.390
68.00	0.075	1.0	0.0014	051.7219	019.3754	052.044
69.00	0.075	1.0	0.0014	051.7219	018.5355	051.713
70.00	0.075	1.0	0.0014	051.7219	017.6899	051.397
71.00	0.074	1.0	0.0014	051.0323	016.6145	051.748
72.00	0.073	1.0	0.0013	050.3426	015.5567	052.121
73.00	0.071	1.0	0.0013	048.9634	014.3155	053.176
74.00	0.069	1.0	0.0012	047.5841	013.1160	054.259
75.00	0.067	1.0	0.0011	046.2049	011.9587	055.370
76.00	0.065	1.0	0.0011	044.8256	010.8443	056.506
77.00	0.063	1.0	0.0010	043.4464	009.7733	057.667
78.00	0.06	1.0	0.0009	041.3775	008.6029	059.527
79.00	0.058	1.0	0.0008	039.9982	007.6320	060.737
80.00	0.055	1.0	0.0008	037.9294	006.5864	062.647
81.00	0.052	1.0	0.0007	035.8605	005.6098	064.581
82.00	0.049	1.0	0.0006	033.7916	004.7029	066.537
83.00	0.046	1.0	0.0005	031.7228	003.8660	068.514
84.00	0.043	1.0	0.0005	029.6539	003.0997	070.509
85.00	0.04	1.0	0.0004	027.5850	002.4042	072.520
86.00	0.037	1.0	0.0003	025.5161	001.7799	074.546
87.00	0.034	1.0	0.0003	023.4473	001.2271	076.585
88.00	0.031	1.0	0.0002	021.3784	000.7461	078.635
89.00	0.028	1.0	0.0002	019.3095	000.3370	080.693
90.00	0.025	1.0	0.0002	017.2406	000.0000	082.759



# EXHIBIT B4 2<sup>nd</sup> Adjacent Protection to WQDR (FM) 234C

W232CI Fayetteville, NC

74.1204(d) Showing

Translator or LPFM Maximum Licensed ERP = 0.25

Translator or LPFM Antenna Height AG = 100 Meters

W232CI Antenna Model = LPX5H

Protected Station's Contour = 65.39091 dBu

Translator's or LPFM's full Interference contour 105.39091

Review Azimuth = 0 Degrees True

Relative Field on the horizon at Review Azimuth = 1.000

Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW

Distance between stations = 75.3 km

Protected Station= WQDR-F, 100 kW, 603 M Meters COR AMSL

\*MIN – Minimum height of Interfering Contour 24.009m AGL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	596.2447	596.2447	100.000
01.00	0.997	1.0	0.2485	594.4559	594.3654	089.625
02.00	0.988	1.0	0.2440	589.0897	588.7309	079.441
03.00	0.972	1.0	0.2362	579.5498	578.7556	069.669
04.00	0.951	1.0	0.2261	567.0287	565.6474	060.446
05.00	0.924	1.0	0.2134	550.9301	548.8336	051.983
06.00	0.892	1.0	0.1989	531.8503	528.9367	044.407
07.00	0.855	1.0	0.1828	509.7892	505.9893	037.872
08.00	0.813	1.0	0.1652	484.7469	480.0294	032.536
09.00	0.768	1.0	0.1475	457.9159	452.2782	028.366
10.00	0.719	1.0	0.1292	428.6999	422.1870	025.557
11.00	0.667	1.0	0.1112	397.6952	390.3884	024.116
12.00	0.613	1.0	0.0939	365.4980	357.5110	024.009*
13.00	0.557	1.0	0.0776	332.1083	323.5964	025.292
14.00	0.5	1.0	0.0625	298.1223	289.2668	027.878
15.00	0.443	1.0	0.0491	264.1364	255.1361	031.636
16.00	0.385	1.0	0.0371	229.5542	220.6616	036.726
17.00	0.329	1.0	0.0271	196.1645	187.5930	042.647
18.00	0.273	1.0	0.0186	162.7748	154.8080	049.700
19.00	0.219	1.0	0.0120	130.5776	123.4635	057.488
20.00	0.167	1.0	0.0070	099.5729	093.5679	065.944
21.00	0.118	1.0	0.0035	070.3569	065.6838	074.786
22.00	0.071	1.0	0.0013	042.3334	039.2508	084.142
23.00	0.028	1.0	0.0002	016.6949	015.3677	093.477
24.00	0.012	1.0	0.0000	007.1549	006.5364	097.090
25.00	0.049	1.0	0.0006	029.2160	026.4787	087.653
26.00	0.082	1.0	0.0017	048.8921	043.9439	078.567
27.00	0.111	1.0	0.0031	066.1832	058.9696	069.953
28.00	0.136	1.0	0.0046	081.0893	071.5976	061.931
29.00	0.157	1.0	0.0062	093.6104	081.8735	054.617
30.00	0.174	1.0	0.0076	103.7466	089.8472	048.127
31.00	0.188	1.0	0.0088	112.0940	096.0833	042.267
32.00	0.198	1.0	0.0098	118.0564	100.1175	037.440
33.00	0.205	1.0	0.0105	122.2302	102.5108	033.429
34.00	0.209	1.0	0.0109	124.6151	103.3106	030.316
35.00	0.21	1.0	0.0110	125.2114	102.5672	028.182
36.00	0.208	1.0	0.0108	124.0189	100.3334	027.104
37.00	0.204	1.0	0.0104	121.6339	097.1412	026.799
38.00	0.197	1.0	0.0097	117.4602	092.5599	027.684
39.00	0.189	1.0	0.0089	112.6902	087.5768	029.082
40.00	0.179	1.0	0.0080	106.7278	081.7582	031.397

41.00	0.168	1.0	0.0071	100.1691	075.5986	034.283
42.00	0.155	1.0	0.0060	092.4179	068.6799	038.160
43.00	0.142	1.0	0.0050	084.6667	061.9213	042.257
44.00	0.128	1.0	0.0041	076.3193	054.8995	046.984
45.00	0.114	1.0	0.0032	067.9719	048.0634	051.937
46.00	0.099	1.0	0.0025	059.0282	041.0044	057.539
47.00	0.085	1.0	0.0018	050.6808	034.5642	062.934
48.00	0.07	1.0	0.0012	041.7371	027.9276	068.983
49.00	0.056	1.0	0.0008	033.3897	021.9056	074.800
50.00	0.042	1.0	0.0004	025.0423	016.0969	080.817
51.00	0.029	1.0	0.0002	017.2911	010.8816	086.562
52.00	0.017	1.0	0.0001	010.1362	006.2404	092.013
53.00	0.005	1.0	0.0000	002.9812	001.7941	097.619
54.00	0.006	1.0	0.0000	003.5775	002.1028	097.106
55.00	0.016	1.0	0.0001	009.5399	005.4719	092.185
56.00	0.026	1.0	0.0002	015.5024	008.6688	087.148
57.00	0.034	1.0	0.0003	020.2723	011.0411	082.998
58.00	0.042	1.0	0.0004	025.0423	013.2704	078.763
59.00	0.048	1.0	0.0006	028.6197	014.7403	075.468
60.00	0.054	1.0	0.0007	032.1972	016.0986	072.116
61.00	0.059	1.0	0.0009	035.1784	017.0548	069.232
62.00	0.064	1.0	0.0010	038.1597	017.9149	066.307
63.00	0.067	1.0	0.0011	039.9484	018.1362	064.406
64.00	0.07	1.0	0.0012	041.7371	018.2964	062.487
65.00	0.072	1.0	0.0013	042.9296	018.1428	061.093
66.00	0.074	1.0	0.0014	044.1221	017.9461	059.692
67.00	0.075	1.0	0.0014	044.7184	017.4729	058.837
68.00	0.075	1.0	0.0014	044.7184	016.7518	058.538
69.00	0.075	1.0	0.0014	044.7184	016.0256	058.252
70.00	0.075	1.0	0.0014	044.7184	015.2946	057.978
71.00	0.074	1.0	0.0014	044.1221	014.3648	058.282
72.00	0.073	1.0	0.0013	043.5259	013.4502	058.604
73.00	0.071	1.0	0.0013	042.3334	012.3771	059.516
74.00	0.069	1.0	0.0012	041.1409	011.3400	060.453
75.00	0.067	1.0	0.0011	039.9484	010.3394	061.413
76.00	0.065	1.0	0.0011	038.7559	009.3759	062.395
77.00	0.063	1.0	0.0010	037.5634	008.4499	063.399
78.00	0.06	1.0	0.0009	035.7747	007.4380	065.007
79.00	0.058	1.0	0.0008	034.5822	006.5986	066.053
80.00	0.055	1.0	0.0008	032.7935	005.6945	067.705
81.00	0.052	1.0	0.0007	031.0047	004.8502	069.377
82.00	0.049	1.0	0.0006	029.2160	004.0661	071.068
83.00	0.046	1.0	0.0005	027.4273	003.3425	072.777
84.00	0.043	1.0	0.0005	025.6385	002.6800	074.502
85.00	0.04	1.0	0.0004	023.8498	002.0786	076.241
86.00	0.037	1.0	0.0003	022.0611	001.5389	077.993
87.00	0.034	1.0	0.0003	020.2723	001.0610	079.755
88.00	0.031	1.0	0.0002	018.4836	000.6451	081.528
89.00	0.028	1.0	0.0002	016.6949	000.2914	083.308
90.00	0.025	1.0	0.0002	014.9061	000.0000	085.094

EXHIBIT C

Proposed W232CI From WAZZ Tower, 74.1233(a)(1) Compliance

