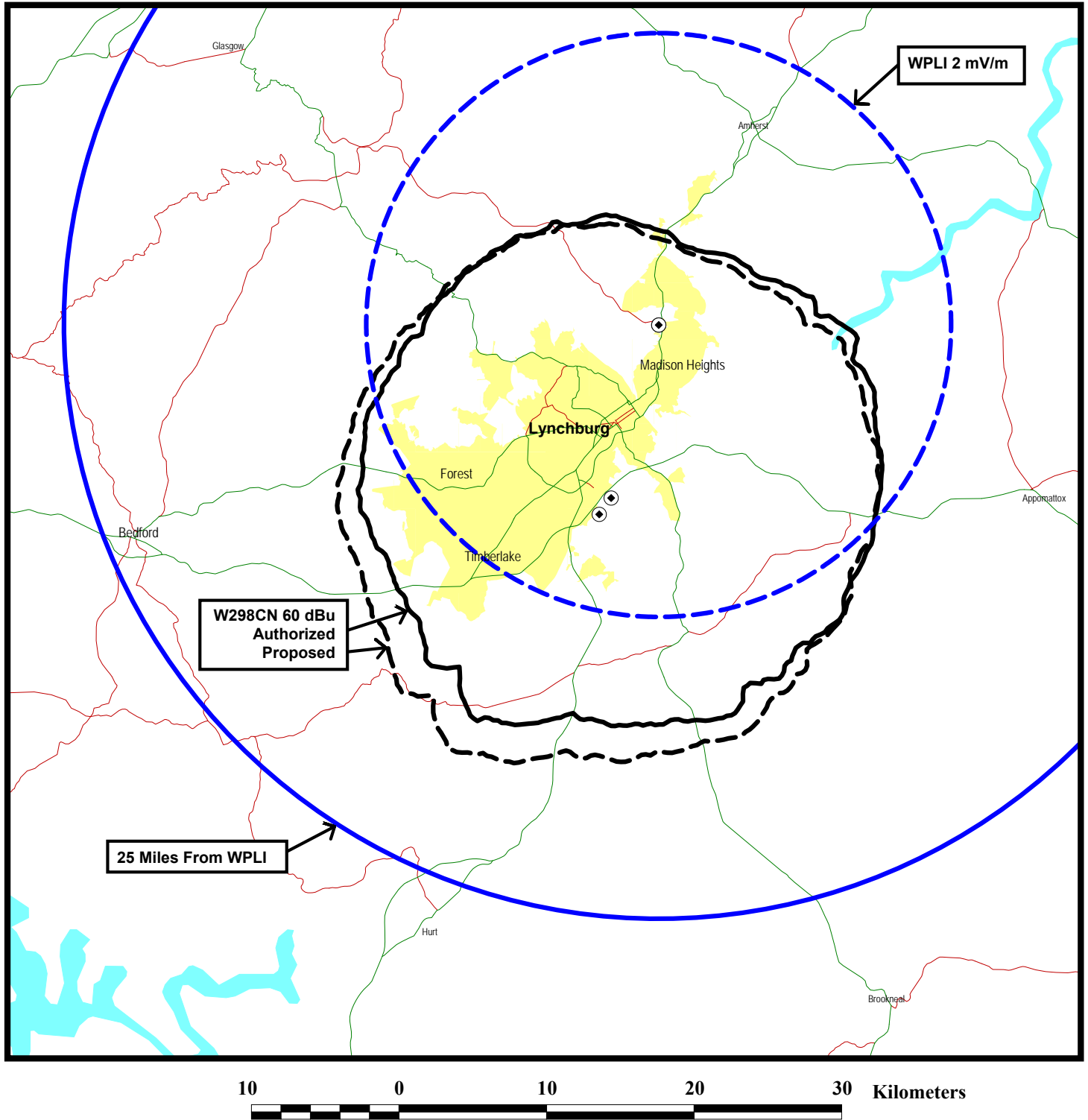


Figure 1



AM FILL-IN COMPLIANCE MAP

FM TRANSLATOR STATION W298CN
LYNCHBURG, VIRGINIA
CH 298 (107.5 MHz) 0.250 KW (ND)

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

FM Contour Study

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



Channel: 298 **Coordinates:** 037-20-56.5 079-10-04.9 (NAD 83) **ERP:** 0.25 kW **Max. HAAT:** 245 m **Considering Only Interference Caused**

Comment: Proposed W298CN

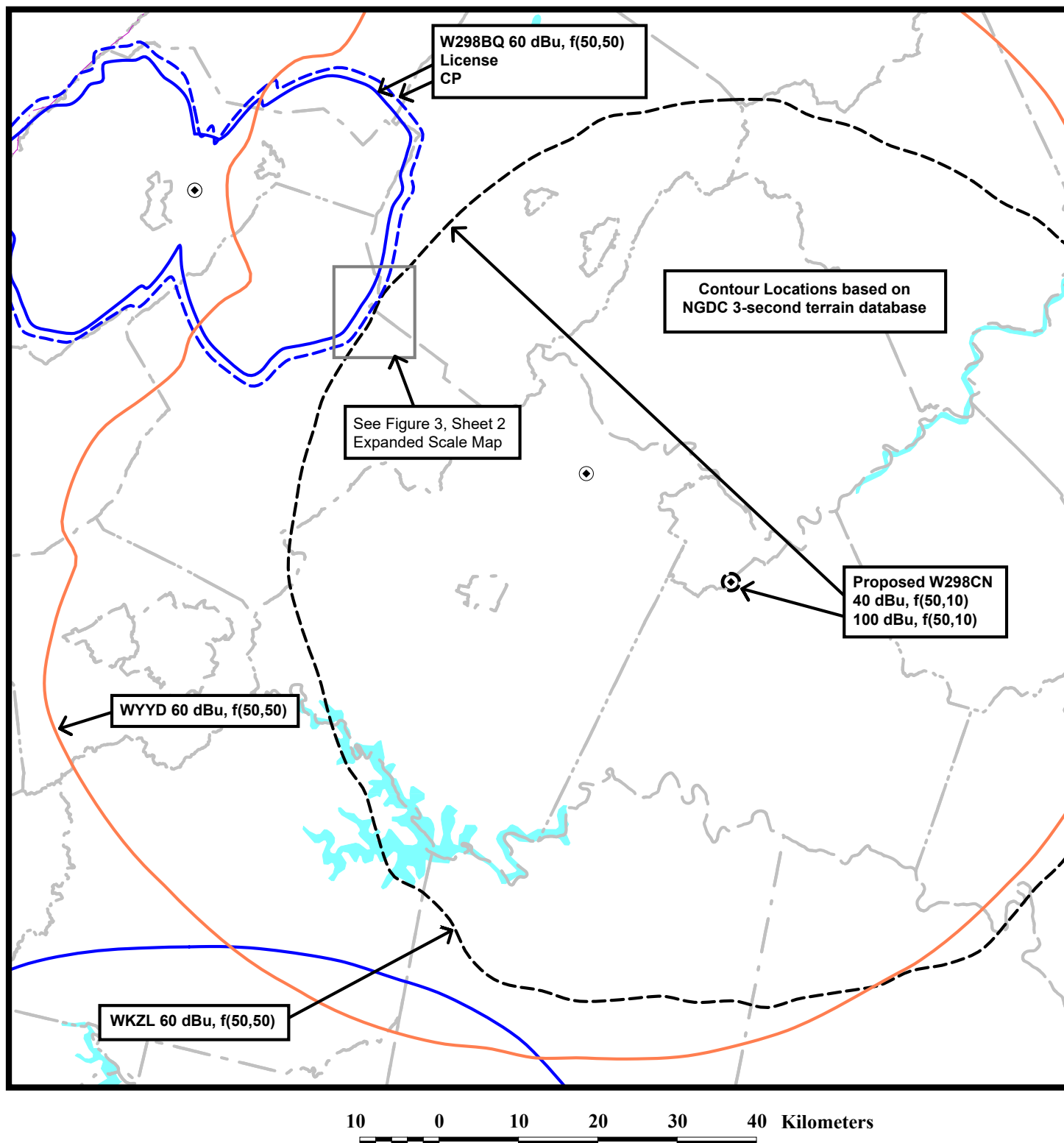
Callsign	Chan.	Service	Status	Freq.	City	State	Co.	Rec.	Latitude	Dist. (km)	Sep. (km)	Spac. (km)
Facility ID	ARN			Class	DA	73.215	ERP (kW)	HAAT (m)	Longitude	Bear. (deg)	Comment	
WTTX-FM	296	FM	LIC	107.1	APPOMATTOX	VA	US	C	37-22-19	29.61	25.01	4.6
12061	BMLED	20060112AEE	A	N	N		1.7	130	078-50-06	84.95	CLOSE	
WTTX-FM 60.0 dBu desired distance: 23.9 km				Proposed 100.0 dBu undesired distance: 1.1 km								
W298CN	298	FX	CP	107.5	LYNCHBURG	VA	US	C	37-21-32.4	1.37	82.93	-81.56
200317	BNPFT	20171206ACA	D	N	N		0.25		079-09-32.2	35.9	SHORT	/1
W298CN 60.0 dBu desired distance: 20.2 km				Proposed 40.0 dBu undesired distance: 62.7 km								
W298BQ	298	FX	CP	107.5	COVINGTON	VA	US	C	37-47-35	83.64	91.84	-8.2
148092	BPFT	20170410AGI	D	N	N		0.25		079-55-59	306.45	SHORT	/2
W298BQ 60.0 dBu desired distance: 29.1 km				Proposed 40.0 dBu undesired distance: 62.7 km								
W298BQ	298	FX	LIC	107.5	COVINGTON	VA	US	C	37-47-35	83.64	90.33	-6.69
148092	BLFT	20170103ABK	D	N	N		0.25		079-55-59	306.45	SHORT	/2
W298BQ 60.0 dBu desired distance: 27.6 km				Proposed 40.0 dBu undesired distance: 62.7 km								
WKZL	298	FM	LIC	107.5	WINSTON-SALEM	NC	US	C	36-16-33	137.62	138.39	-0.77
16891	BLH	19921016KD	C	N	Y		100	303	079-56-27	210.2	SHORT	/2
WKZL 60.0 dBu desired distance: 75.6 km				Proposed 40.0 dBu undesired distance: 62.7 km								
WCHV-FM	298	FM	LIC	107.5	CHARLOTTESVILLE	VA	US	C	37-59-05	93.06	87.55	5.51
61716	BLH	19960112KD	A	N	N		0.21	338	078-28-49	40.37	CLOSE	
WCHV-FM 60.0 dBu desired distance: 24.8 km				Proposed 40.0 dBu undesired distance: 62.7 km								
WYYD	300	FM	LIC	107.9	AMHERST	VA	US	C	37-28-19	22.8	77.35	-54.55
74282	BLH	20081117AAL	C1	N	N		19	549	079-22-28	306.92	SHORT	/3
WYYD 60.0 dBu desired distance: 76.3 km				Proposed 100.0 dBu undesired distance: 1.1 km								

/1 Current W298CN.

/2 Proposal complies with the contour overlap provisions of Section 74.1204(a). See Exhibit 17 and Figure 3.

/3 There will be contour overlap normally prohibited by Section 74.1204. However, based on the U/D signal strength ratio method (per Living Way Ministries), there will be no actual interference due to lack of population under Section 74.1204(d). See Exhibit 17 and Figure 4.

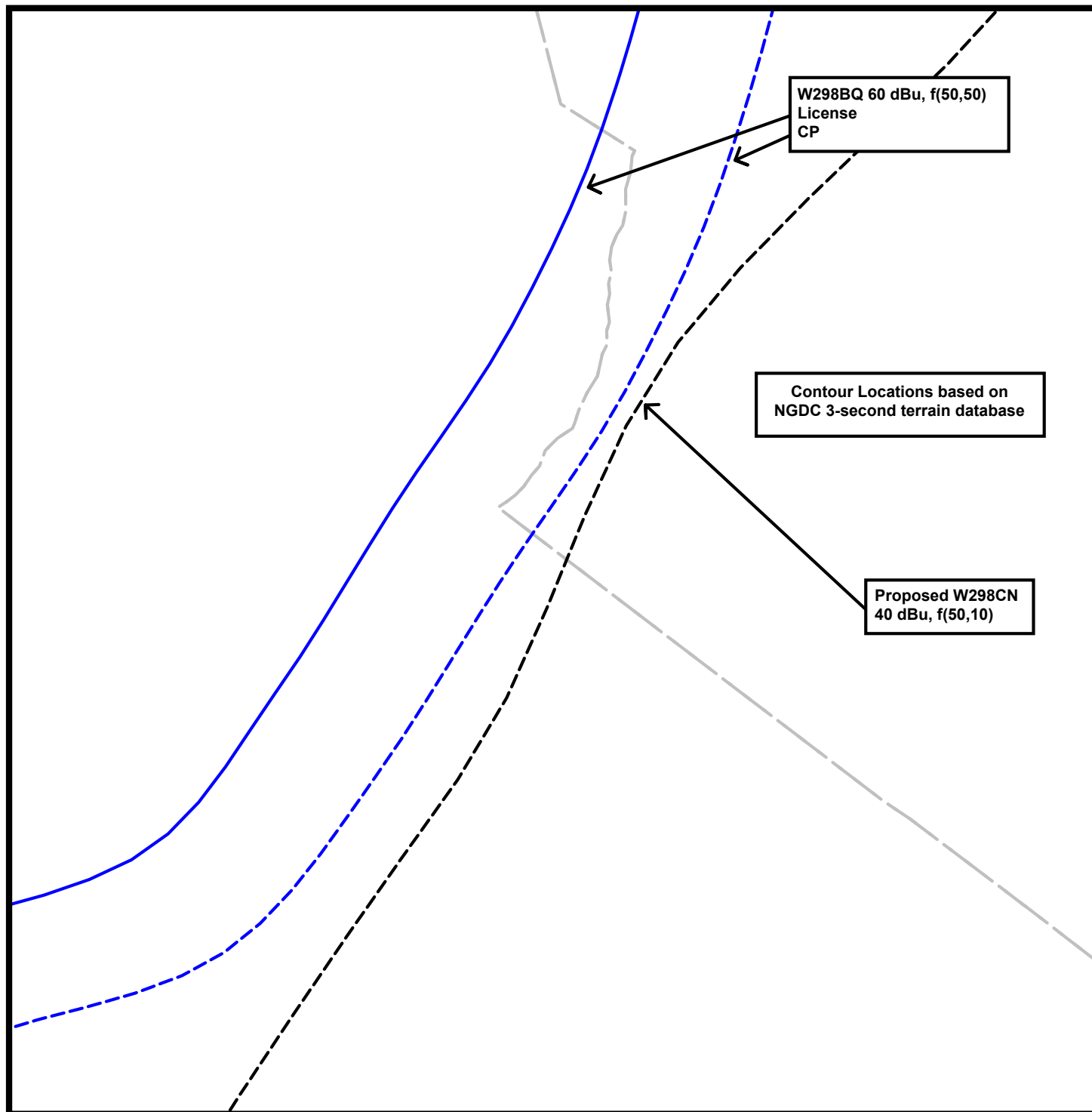
Figure 3
Sheet 1 of 2



COMPLIANCE WITH SECTION 74.1204

FM TRANSLATOR STATION W298CN
LYNCHBURG, VIRGINIA
CH 298 (107.5 MHZ) 0.250 KW (ND)

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



1 0 1 2 3 Kilometers

**COMPLIANCE WITH SECTION 74.1204
[EXPANDED SCALE MAP]**

FM TRANSLATOR STATION W298CN
LYNCHBURG, VIRGINIA
CH 298 (107.5 MHZ) 0.250 KW (ND)

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 4



UNDESIRE-TO-DESIRED (U/D) SIGNAL STRENGTH INTERFERENCE RATIO ANALYSIS

FM TRANSLATOR STATION W298CN

LYNCHBURG, VIRGINIA

CH 298 (107.5 MHZ) 0.25 KW (ND)

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

NGDC TERRAIN DATA AND DISTANCES TO CONTOURS

Proposed W298CN				100 dBu f(50,10)	60 dBu f(50,50)	40 dBu f(50,10)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Dist. (m)</u>	<u>Dist. (m)</u>	<u>Dist. (m)</u>
0	210	225	0.25	1.1	19.7	60.8
5	208	227	0.25	1.1	19.7	61.0
10	221	214	0.25	1.1	19.1	59.5
15	223	212	0.25	1.1	19.1	59.4
20	230	205	0.25	1.1	18.7	58.5
25	227	208	0.25	1.1	18.9	58.9
30	226	209	0.25	1.1	18.9	59.0
35	229	206	0.25	1.1	18.8	58.7
40	219	216	0.25	1.1	19.2	59.7
45	217	218	0.25	1.1	19.3	60.0
50	207	228	0.25	1.1	19.7	61.0
55	196	239	0.25	1.1	20.2	62.2
60	206	229	0.25	1.1	19.8	61.2
65	209	226	0.25	1.1	19.7	60.8
70	221	214	0.25	1.1	19.2	59.6
75	219	216	0.25	1.1	19.2	59.8
80	220	215	0.25	1.1	19.2	59.6
85	222	213	0.25	1.1	19.1	59.5
90	231	204	0.25	1.1	18.7	58.4
95	234	201	0.25	1.1	18.6	58.2
100	252	183	0.25	1.1	17.8	56.1
105	254	181	0.25	1.1	17.7	55.8
110	250	185	0.25	1.1	17.9	56.3
115	253	182	0.25	1.1	17.7	56.0
120	264	171	0.25	1.1	17.2	54.6
125	264	171	0.25	1.1	17.2	54.6
130	263	172	0.25	1.1	17.2	54.7
135	265	170	0.25	1.1	17.1	54.5
140	259	176	0.25	1.1	17.4	55.2
145	251	184	0.25	1.1	17.8	56.1
150	257	178	0.25	1.1	17.5	55.4
155	268	167	0.25	1.1	16.9	54.0
160	267	168	0.25	1.1	17.0	54.1
165	273	162	0.25	1.1	16.7	53.5
170	275	160	0.25	1.1	16.5	53.2
175	270	165	0.25	1.1	16.8	53.8
180	278	157	0.25	1.1	16.4	52.8
185	275	160	0.25	1.1	16.5	53.1
190	276	159	0.25	1.1	16.5	53.0
195	265	170	0.25	1.1	17.1	54.5
200	251	184	0.25	1.1	17.8	56.2
205	246	189	0.25	1.1	18.1	56.8
210	233	202	0.25	1.1	18.6	58.2
215	238	197	0.25	1.1	18.4	57.7
220	257	178	0.25	1.1	17.5	55.4
225	259	176	0.25	1.1	17.4	55.2
230	249	186	0.25	1.1	17.9	56.4
235	262	173	0.25	1.1	17.2	54.8
240	274	161	0.25	1.1	16.6	53.3
245	271	164	0.25	1.1	16.8	53.7

Proposed W298CN				100 dBu f(50,10)	60 dBu f(50,50)	40 dBu f(50,10)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Dist. (m)</u>	<u>Dist. (m)</u>	<u>Dist. (m)</u>
250	272	163	0.25	1.1	16.7	53.5
255	274	161	0.25	1.1	16.6	53.3
260	271	164	0.25	1.1	16.8	53.7
265	264	171	0.25	1.1	17.2	54.6
270	255	180	0.25	1.1	17.6	55.7
275	254	181	0.25	1.1	17.7	55.8
280	255	180	0.25	1.1	17.6	55.7
285	253	182	0.25	1.1	17.7	55.9
290	253	182	0.25	1.1	17.7	56.0
295	249	186	0.25	1.1	17.9	56.4
300	251	184	0.25	1.1	17.8	56.1
305	253	182	0.25	1.1	17.7	55.9
310	245	190	0.25	1.1	18.1	56.9
315	246	189	0.25	1.1	18.0	56.7
320	242	193	0.25	1.1	18.2	57.2
325	237	198	0.25	1.1	18.5	57.8
330	232	203	0.25	1.1	18.7	58.4
335	226	209	0.25	1.1	18.9	59.0
340	224	211	0.25	1.1	19.0	59.3
345	211	224	0.25	1.1	19.6	60.6
350	215	220	0.25	1.1	19.4	60.2
355	211	224	0.25	1.1	19.6	60.6

W298BQ License				60 dBu f(50,50)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
0	818	14	0.25	7.1
5	853	-21	0.25	7.1
10	855	-23	0.25	7.1
15	835	-3	0.25	7.1
20	896	-64	0.25	7.1
25	972	-140	0.25	7.1
30	791	41	0.25	8.3
35	714	118	0.25	13.9
40	712	120	0.25	14.1
45	625	207	0.25	18.9
50	534	298	0.25	22.5
55	484	348	0.25	24.2
60	437	395	0.25	25.7
65	415	417	0.25	26.3
70	390	442	0.25	27.1
75	365	467	0.25	27.9
80	393	439	0.25	27.0
85	429	403	0.25	25.9
90	425	407	0.25	26.0
95	465	367	0.25	24.9
100	471	361	0.25	24.7
105	466	366	0.25	24.8
110	457	375	0.25	25.1
115	448	384	0.25	25.4
120	444	388	0.25	25.5
125	445	387	0.25	25.5
130	438	394	0.25	25.7
135	435	397	0.25	25.7

W298BQ License				60 dBu f(50,50)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
140	469	363	0.25	24.7
145	497	335	0.25	23.8
150	522	310	0.25	22.9
155	514	318	0.25	23.2
160	483	349	0.25	24.3
165	494	338	0.25	23.9
170	564	268	0.25	21.4
175	622	210	0.25	19.0
180	687	145	0.25	15.6
185	740	92	0.25	12.4
190	779	53	0.25	9.6
195	801	31	0.25	7.2
200	774	58	0.25	10.0
205	723	109	0.25	13.4
210	711	121	0.25	14.2
215	637	195	0.25	18.3
220	505	327	0.25	23.5
225	458	374	0.25	25.1
230	410	422	0.25	26.5
235	423	409	0.25	26.1
240	439	393	0.25	25.6
245	444	388	0.25	25.5
250	472	360	0.25	24.6
255	508	324	0.25	23.4
260	489	343	0.25	24.0
265	488	344	0.25	24.1
270	487	345	0.25	24.1
275	468	364	0.25	24.7
280	434	398	0.25	25.8
285	490	342	0.25	24.0
290	528	304	0.25	22.7
295	551	281	0.25	21.9
300	574	258	0.25	21.0
305	623	209	0.25	18.9
310	632	200	0.25	18.5
315	628	204	0.25	18.7
320	644	188	0.25	18.0
325	607	225	0.25	19.6
330	624	208	0.25	18.9
335	642	190	0.25	18.1
340	646	186	0.25	17.9
345	701	131	0.25	14.7
350	724	108	0.25	13.4
355	750	82	0.25	11.7

W298BQ CP				60 dBu f(50,50)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
0	818	59	0.25	10.1
5	853	24	0.25	7.1
10	855	22	0.25	7.1
15	835	42	0.25	8.4
20	896	-19	0.25	7.1

W298BQ CP	60 dBu f(50,50)			
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
25	972	-95	0.25	7.1
30	791	86	0.25	12.0
35	714	163	0.25	16.7
40	712	165	0.25	16.8
45	625	252	0.25	20.8
50	534	343	0.25	24.1
55	484	393	0.25	25.6
60	437	440	0.25	27.0
65	415	462	0.25	27.7
70	390	487	0.25	28.6
75	365	512	0.25	29.4
80	393	484	0.25	28.5
85	429	448	0.25	27.3
90	425	452	0.25	27.4
95	465	412	0.25	26.2
100	471	406	0.25	26.0
105	466	411	0.25	26.1
110	457	420	0.25	26.4
115	448	429	0.25	26.7
120	444	433	0.25	26.8
125	445	432	0.25	26.8
130	438	439	0.25	27.0
135	435	442	0.25	27.1
140	469	408	0.25	26.1
145	497	380	0.25	25.2
150	522	355	0.25	24.5
155	514	363	0.25	24.7
160	483	394	0.25	25.7
165	494	383	0.25	25.3
170	564	313	0.25	23.0
175	622	255	0.25	20.9
180	687	190	0.25	18.1
185	740	137	0.25	15.1
190	779	98	0.25	12.7
195	801	76	0.25	11.3
200	774	103	0.25	13.0
205	723	154	0.25	16.1
210	711	166	0.25	16.9
215	637	240	0.25	20.3
220	505	372	0.25	25.0
225	458	419	0.25	26.4
230	410	467	0.25	27.9
235	423	454	0.25	27.5
240	439	438	0.25	27.0
245	444	433	0.25	26.8

W298BQ CP				60 dBu f(50,50)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
250	472	405	0.25	26.0
255	508	369	0.25	24.9
260	489	388	0.25	25.5
265	488	389	0.25	25.5
270	487	390	0.25	25.6
275	468	409	0.25	26.1
280	434	443	0.25	27.1
285	490	387	0.25	25.5
290	528	349	0.25	24.3
295	551	326	0.25	23.5
300	574	303	0.25	22.7
305	623	254	0.25	20.8
310	632	245	0.25	20.5
315	628	249	0.25	20.6
320	644	233	0.25	20.0
325	607	270	0.25	21.4
330	624	253	0.25	20.8
335	642	235	0.25	20.0
340	646	231	0.25	19.9
345	701	176	0.25	17.4
350	724	153	0.25	16.1
355	750	127	0.25	14.5

WKZL				60 dBu f(50,50)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
0	226	313	100	73.4
5	223	316	100	73.6
10	220	319	100	73.8
15	216	323	100	74.1
20	215	324	100	74.1
25	208	331	100	74.7
30	206	333	100	74.8
35	209	330	100	74.6
40	223	316	100	73.6
45	235	304	100	72.7
50	245	294	100	71.9
55	245	294	100	71.9
60	248	291	100	71.7
65	258	281	100	70.8
70	262	277	100	70.5
75	256	283	100	71.0
80	255	284	100	71.1
85	253	286	100	71.2
90	259	280	100	70.8
95	254	285	100	71.2

WKZL	60 dBu f(50,50)			
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
100	246	293	100	71.8
105	242	297	100	72.1
110	248	291	100	71.7
115	252	287	100	71.4
120	251	288	100	71.5
125	252	287	100	71.4
130	248	291	100	71.7
135	254	285	100	71.2
140	251	288	100	71.5
145	248	291	100	71.6
150	252	287	100	71.3
155	255	284	100	71.1
160	258	281	100	70.9
165	257	282	100	70.9
170	256	283	100	71.0
175	261	278	100	70.6
180	265	274	100	70.2
185	267	272	100	70.1
190	265	274	100	70.3
195	267	272	100	70.1
200	272	267	100	69.7
205	276	263	100	69.3
210	276	263	100	69.3
215	281	258	100	68.9
220	279	260	100	69.0
225	266	273	100	70.2
230	259	280	100	70.7
235	259	280	100	70.7
240	264	275	100	70.4
245	266	273	100	70.2
250	259	280	100	70.8
255	259	280	100	70.7
260	249	290	100	71.5
265	253	286	100	71.3
270	249	290	100	71.6
275	245	294	100	71.9
280	236	303	100	72.6
285	232	307	100	72.9
290	227	312	100	73.3
295	228	311	100	73.2
300	228	311	100	73.2
305	221	318	100	73.7
310	222	317	100	73.7
315	228	311	100	73.2
320	227	312	100	73.3

WKZL				60 dBu f(50,50)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
325	223	316	100	73.6
330	222	317	100	73.7
335	224	315	100	73.5
340	217	322	100	74.0
345	215	324	100	74.1
350	219	320	100	73.9
355	224	315	100	73.5

WYYD				60 dBu f(50,50)
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
0	265	607	19	74.9
5	292	580	19	73.7
10	290	582	19	73.8
15	280	592	19	74.3
20	284	588	19	74.1
25	273	599	19	74.6
30	268	604	19	74.8
35	268	604	19	74.8
40	265	607	19	74.9
45	262	610	19	75.0
50	262	610	19	75.0
55	277	595	19	74.4
60	271	601	19	74.6
65	268	604	19	74.8
70	247	625	19	75.6
75	242	630	19	75.8
80	279	593	19	74.3
85	290	582	19	73.8
90	304	568	19	73.2
95	298	574	19	73.5
100	304	568	19	73.2
105	298	574	19	73.4
110	304	568	19	73.2
115	299	573	19	73.4
120	285	587	19	74.1
125	284	588	19	74.1
130	280	592	19	74.3
135	282	590	19	74.2
140	278	594	19	74.3
145	276	596	19	74.4
150	284	588	19	74.1
155	279	593	19	74.3
160	272	600	19	74.6
165	274	598	19	74.5
170	275	597	19	74.5

WYYD	60 dBu f(50,50)			
<u>Azm (°T)</u>	<u>Terrain (m)</u>	<u>HAAT (m)</u>	<u>ERP (kW)</u>	<u>Distance (m)</u>
175	286	586	19	74.0
180	294	578	19	73.6
185	289	583	19	73.9
190	297	575	19	73.5
195	282	590	19	74.2
200	274	598	19	74.5
205	269	603	19	74.7
210	272	600	19	74.6
215	269	603	19	74.7
220	273	599	19	74.6
225	277	595	19	74.4
230	273	599	19	74.6
235	273	599	19	74.6
240	274	598	19	74.5
245	278	594	19	74.4
250	312	560	19	72.8
255	369	503	19	69.2
260	425	447	19	65.4
265	411	461	19	66.3
270	440	432	19	64.4
275	487	385	19	61.6
280	566	306	19	56.4
285	616	256	19	52.9
290	621	251	19	52.6
295	644	228	19	50.9
300	671	201	19	48.7
305	598	274	19	54.3
310	533	339	19	58.7
315	516	356	19	59.8
320	467	405	19	62.8
325	455	417	19	63.5
330	486	386	19	61.7
335	433	439	19	64.9
340	356	516	19	70.1
345	321	551	19	72.3
350	284	588	19	74.1
355	262	610	19	75.0

TX station:

Figure 6

Frequency: 100.00 MHz

Vertical diagram

